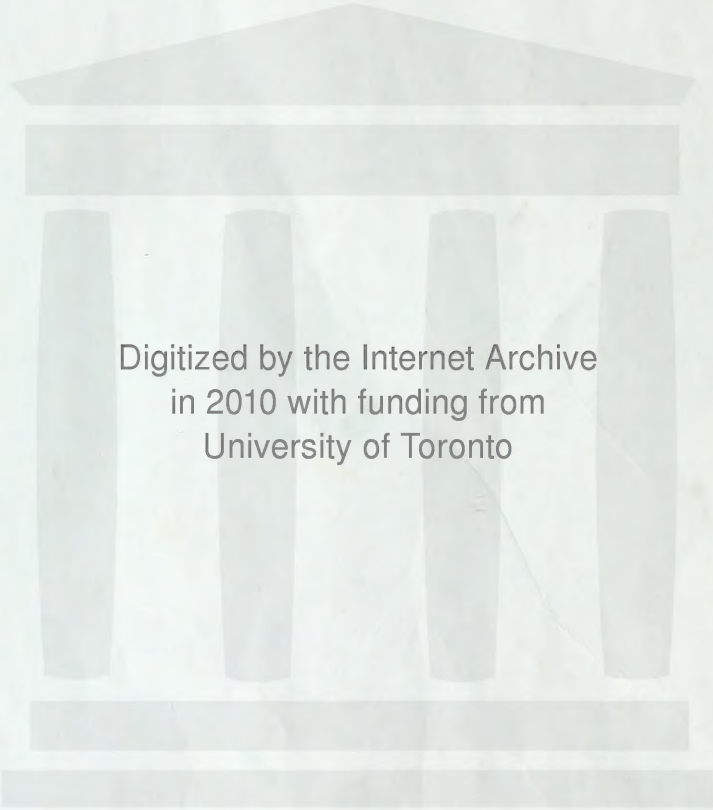




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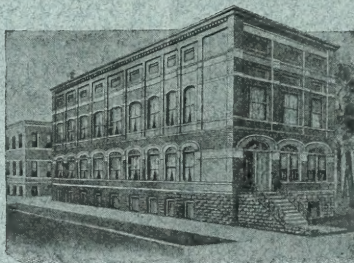
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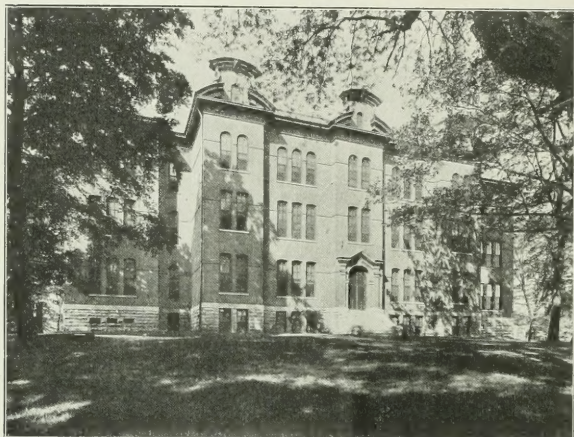
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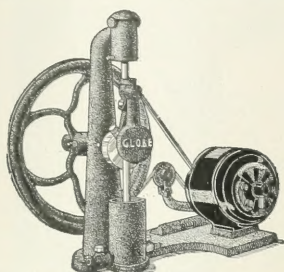
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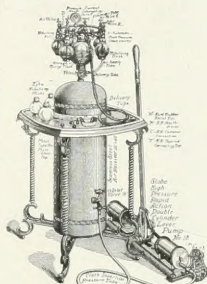
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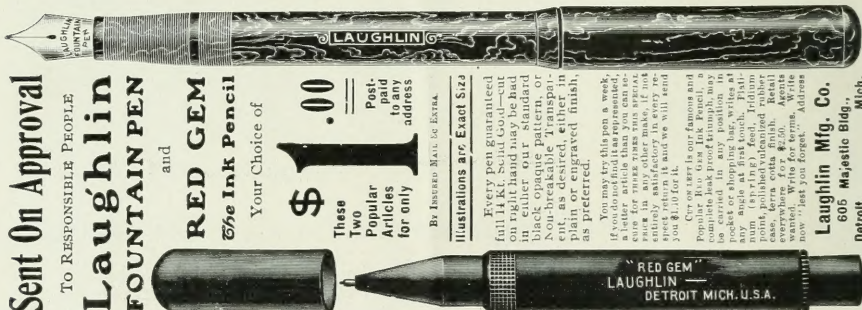
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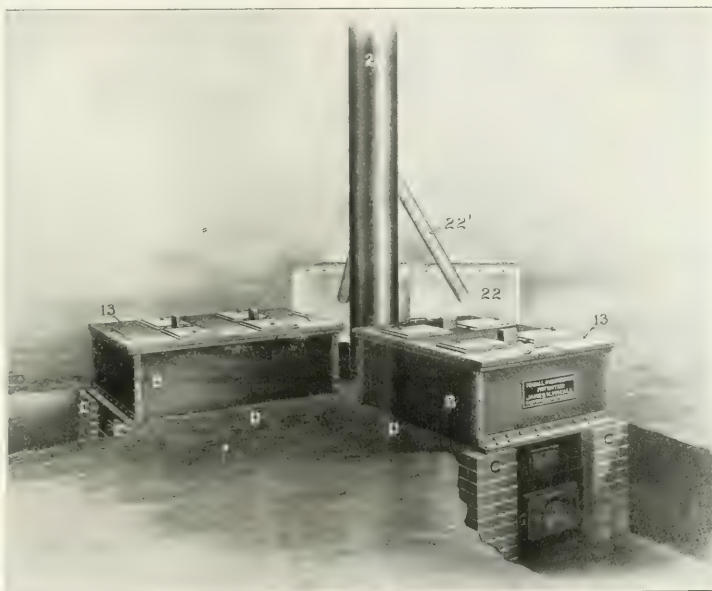
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ORIGINAL CONTRIBUTIONS

THE PHILOSOPHY, THERAPEUTIC VALUE, AND PRESENT STATUS OF MENTAL SUGGESTION*

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It has long been known to medical science that the functions of the physical body and the motions of the objective mind are under the control of a higher human spiritual principle—a control which, when relaxed or unexercised, may be evoked by what is known as suggestion, along lines that are regulative and healing in the one case, and in the other nature-changing, character-building, and prodigally creative of that incorporeal force which tends to fashion man's earth-life on more exalted principles. Absorbing interest centers in an instrumentality so powerful and variform.

Leaders of science are becoming conscious of a super-physical world, which men have sought to apprehend since men began to think. Psychology, which, in its practical phase, contemplates the development of spiritual faculty, is recognized as a study paramount. The depth and power and deathlessness of the human personality—all objects of non-sensuous intuition (noumena)—have come to be clearly apprehended; materialism is scouted; and sanguine observers, sensing the dawn of a new epoch, see implied in the promise of things a proximate application of Emer-

son's philosophy: "When the Master of the universe has points to carry in His government He impresses His will in the structure of minds"—let us interpret it, in the evolution of the spiritual consciousness of man, the logical method of improving environment and unmaking heredity, the key that unlocks the way to millennial perfection.

In this intelligent age, which no longer regards the suggestional procedure either as the plaything of science, the brand of charlatanism, or a mere *ignis fatuus* of addle-pates, but fully apprehending the influence of spirit over all expression through a physical organism, unquestioningly accepts psychological therapeutics as a legitimate application of the healing art, this address need not be introduced with an apology. The subject under consideration will be discussed:

(1) With reference to the nature of the subliminal self or sub-personal mind and the philosophy of suggestion.

(2) With reference to the practical value of psycho-therapy in the treatment of physical, mental and moral diseases.

Psychology and Scripture agree in affirming man to be dichotomic—that is, of bipartite

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nature or dual constitution. He is material as body (*soma*), and immaterial as spirit (*pneuma-psyche*). He is thus the only spiritual animal, and as such, exists simultaneously in two worlds of consciousness. These are distinguished as the objective or supraliminal (*above the dividing line between the two realms*), the world of everyday waking life, in which he takes cognizance of outside conditions through the operations of sense organs, in which he is known to his associates and carries on his ordinary vocations—and the subjective or subliminal (*below the dividing line*), the world of sleep, in which the spiritual principle employs and disports itself without corporeal restraint. Of this all-comprehensive outside existence, the earth-life is but a partial expression. The objective self represents spirit entangled with a perishable medium. The subjective self is the pure spirit or *pneuma*, capable of existing apart from a material vehicle and of acting independently of a physical environment. Every human being is thus continuous with a superior, immaterial concrete organism, or wider cosmic self, which in its turn is continuous with the primal source of all life. "A great and sacred spirit talks indeed with us," said Seneca in his forty-first Epistle, "yet cleaves to its divine original." And this philosophy is paralleled by the teaching of St. Paul. Breathed of God, formed after the Divine Image, the *pneuma* or spirit—the highest aspect of the human self—is measurably endowed by its Creator with His own super-sensible attributes, resources and knowledge. And by reason of its divine descent, it intuitively loves what God loves and hates what God hates. Its objective mission is to quicken the earth-life.

The higher subliminal self is gifted with spiritual perception, with supernormal powers of apprehension and insight, with absolute command over expression through a bodily organism that is practically boundless within the limitations of physical possibility and moral right, with susceptibility to impression by other human personalities and kindred spir-

itual intelligences, with telepathic powers to impress these in turn, and with a measure of prescience that on occasion forecasts what is to be. Of these unconscious agencies and forces few have any realization; yet the secret of superior living consists in their translation into the earth-life—in the transfer of knowledge, faith, self-command, ideals, aspiration, creative power, *from* the subliminal to the supraliminal sphere—*from* the nature that is richly endowed to the nature that is starving for spiritual energy. And this may all and naturally be effected through auto- or hetero-suggestion, which awakens ethico-spiritual activities in the supraliminal life, and subordinates the lower tendencies of the carnal nature, when imparted by one who operates with the courage of conviction. In other words, the inner man, or ego, of the subliminal sphere, never fails, if adequately aroused, to exalt the earth-life, to raise humanity nearer to the level of Deity. There is something in the man greater than the man we see—that is not God.

I have dwelt thus at length on the character and powers of the subliminal self in order that you may understand the transformations it accomplishes as due to its absolute transcendence over the objective nature. It is all but infinitely adequate to human needs. What Immanuel Kant taught as the result of psychological insight, I have proved by 10,000 experiences with the subliminal natures of intellectual beings—the absolute lordship of the transcendental consciousness. Above the realm of the material universe lies the realm of free, self-conscious, infinitely attributed spirit.

Now, what is suggestion? It is nothing but a straightforward, heartfelt, dynamic appeal to the subliminal self, the source of spiritual energy in man's being. It is vastly more than good advice which the subpersonal mind is glad to accept. It is of the nature of creative communication, a calling forth into overpowering action of the Godlike in the man—action that carries all before it in the earth-life—all tendency to deviation from the nor-

mal type—physical, intellectual, moral—even the objective will itself, iron though it seem to be. And *rapprochement*, the peculiar harmonious relationship, is but a realization by the subject of sympathy on the part of the suggestionist, with confidence in his judgment, purity of motive, and power to inspire. But it must be a strong, rich, pure personality that can so animate the creative imagination, dispel melancholia and delusion, blot out criminal tendencies, or sound the deep mysteries of love and hate, of hope and wanhope, of doubt and trust—a personality whom the impressed self can look up to and respect. A subject dormant quickly discovers the hypocrite in an operator; and a well-meaning soul will always revolt at the intrusion of a sordid or sensual self, and spontaneously repel its advances. For this reason, the power of suggestion to deprave is providentially limited. Moral injury can hardly be inflicted through suggestional channels. The God-part of the being under treatment is no man's fool. On the other hand, the good that is accomplished depends on the worth of the practitioner. If he be not an earnest and sincere believer in his suggestions, if he sees not a brother in the evildoer, in the victim of depravity from which his soul recoils in horror; if he withholds that best gift one can offer to his neighbor—viz., himself—he can expect no return from the personality he addresses. The regenerative force is measured absolutely by quality of soul in him who seeks to impart the dynamogenic touch.

Suggestion, then, is to be regarded as a means whereby the man in need is apprised of the efficiency within him, and when so enlightened is inspired to come to his own aid and work out his own salvation in his own objective life without conscious effort or constraint. I would lay special emphasis on the fact that he is not constrained by the will of the suggestionist, that he is not the automaton either of God or man. He does what ought to be done, not because he is urged to, but of his own free impulse, in response to an inspiration rendered irresistible by its con-

formity to experience and truth. The will may be the ring upon which are strung all the keys of our objective nature; but the will bends and breaks before the force of impulse launched in the cause of truth and righteousness from the subliminal plane of spontaneous insight and command. No man's will can withstand such impelling force projected from his better godlike nature. The secret of suggestion is to stimulate that output of spiritual energy which overwhelms the antagonism of the will and automatically compels in the intelligent creature adjustment to the law of right. Thus the theory that one man's will can be forcibly subjected to another man's will either in or out of sleep, or that his objective will can, in actual conflict, prevail against the divine potency in the man, is inconsistent with an exalted conception of the inherent dignity and worth of human nature.

It happens to be a psychological fact that in a state of ordinary sleep or abstraction—which may be variously induced, when the brain is inactive, and the presiding psyche, thus relieved from all obligation to receive and interpret sense messages from the material world, is left wholly open to impression by other personalities in whom it confides and believes—the subliminal self may be brought into active control of the earth-life. The sleeping subject is constrained after waking to obey the impulses of his own superior self, thus set in motion by a qualified fellow being. The beautiful feature of such suggestional treatment is its unequivocal naturalness. It has nought to do with mesmerism, odylism, hypnotism as popularly understood, in which a low stratum or fallible phase of the personality is addressed, and the subject exposed to deception and injury. Spiritual contact with a moral man in any state of being cannot deprave. But it must be conceded that the mountebank who for hire throws fellow-beings into a mesmeric state on the stage for the amusement of curiosity-hunters is *immoral*; and the unstable persons who submit, and enact the subconsciously understood comedy night after night, are obnoxious

to the contraction of the hypnotic habit, and so to mental and moral harm. In natural sleep, the higher personality is reached with its keen insight, inflexible principle, limitless capacity—the superior spiritual self, the image of God; and so the maximum benefit can be secured to the sleeper.

Now to what forms of disease is this treatment applicable? Little need be said regarding its value in the treatment of physical maladies. Its efficacy here is everywhere conceded.

From the physical viewpoint, mental suggestion has for its aim the restoration, to perfect fulfillment, of functions that are disturbed or half performed, through its regulation of the ordinary processes of digestion, metabolism, circulation, and innervation in general. Errors in assimilation may be corrected, and nutrition made perfect in fields where it is defective. It has been shown that the human personality can be inspired to accomplish in the earth life anything that is physically possible, and much that is possible is undreamed of by the objective self. The infinite faculty inhering in the subliminal man may be made instantaneously available, by suggestional appeal, for the relief of bodily suffering, as well as for the cure of mental and moral disease. Not only is the energy expended in a thousand every-day expressions of the physical life continually replenished from the spiritual sphere; but from the same source may be summoned a supplementary contingent to provide against deficits, to retard waste and degeneration, to re-establish functional integrity. The value of suggestion for such purposes is universally admitted. Reputable physicians in this country and abroad are employing it extensively in the substantial relief or permanent cure of functional disorders of digestion, absorption and circulation; of chronic constipation, seasickness, and cutaneous affections; of nervous conditions represented by hysteria, hystero-epilepsy, pseudo-meningitis, petit mal, chorea, habit spasms, occupation neuroses like telegrapher's arm, writer's, violinist's and ballet dancer's cramp,

psychogenic cardiac arrhythmia, pseudo-angina, speech defects, intractable insomnia and neurasthenia or nervous exhaustion; even of diseases characterized by severe pain like sciatica and other forms of neuritis. Indeed there is no rational sufferer who may not be benefited in some degree by such treatment.

The dynamic impulse communicated by suggestion may institute control of disordered physical functions positively unattainable by the objective nature—may, for instance, soften a sclerosis, hasten the absorption of exudates and inflammatory products, compel the responsiveness of nutritive processes, re-establish glycogenic poise in diabetes mellitus. By way of example, take the latter.

Diabetes implies an error in the metabolic activity of the liver cells, the result of a loss of control by the glycogenic center, whereby sugary elements hurry through these organs unchanged, or are produced there in excessive quantity, to be excreted by the kidneys instead of being retained in the system and converted into energy. The rationale of suggestion here involves assurance of psychic control over the manufacture and assimilation of sugar; the ordering of its retention in the body and its transformation there into capacity for work and for happiness; the destruction of appetite for carbohydrates, together with the intense thirst characteristic of the disease; the creation of tolerance or even desire for the prescribed diet; the directions for an equable increase in flesh, strength and activity. Diabetic patients respond immediately to such appeal; and no better illustration of psycho-physical control can be adduced than the disappearance of this functional disease in obedience to the decree of the subliminal self.

Within the past ten years, a number of diabetics have been referred to the speaker for treatment, and these, so far as his knowledge goes, are the first cases of this disorder to which suggestion has been applied. The sleeping patients were urged to correct the perverted nervous function, so that, first, the carbo-hydrates allowed as food should be properly assimilated; and, secondly, that sugar

should not be manufactured in excess. I always add to this a suggestion covering possible pancreatic involvement, viz., "And if your pancreas be crippled in its production of the natural ferment, which is given off to blood and lymph, and which conditions the normal consumption of sugar in the body, or restrains the output of sugar from the liver and tissues, you will see that it forthwith pours into your blood or lymph a sufficient quantity of sugar-oxidizing ferments."

Such language supposes an intimate acquaintance with the theories of diabetes, which some of my patients possess. Suggestions are added to control the craving for sweets, the quantity of urine voided, and its specific gravity. All my patients have been markedly benefited or entirely cured by this treatment. Following is a report of two representative cases:

Case 1. M. L., a little girl of six, was sent to me from the West in November, 1901, under a death sentence from a number of specialists. Her urine contained six and one-quarter per cent of sugar; the daily quantity voided was sixty-five ounces, and the specific gravity 1038. Three treatments by suggestion were given after the child was asleep in bed at night, with the result of entirely eliminating the sugar, of reducing the specific gravity to 1017, and the daily amount of urine to twenty-four ounces, all in the space of ten days. The suggestions had to be made comprehensible to a child intellect. I explained in simple language that food made sugar, and sugar made strength; directed that the sugar should not be allowed to escape with the urine, but must be retained in the body to be changed into pleasant feeling, good spirits and power to run about, ride her pony, and drive the donkeys in Central Park and go to the Horse Show. Failure to convert the sugar was associated with the necessity of staying indoors, becoming sick and having to go to bed. Prominent specialists had ordered this child to a southern climate, so I instructed the trained nurse, both objectively and in hypnosis, what to do, and placed her in charge. The patient

lived for more than two years after the treatment in a state of comparatively good health. The cause of death is unknown to me.

Case 2. N. J. G., a New Hampshire farmer, aged thirty-five, who was examined in May, 1902, by Professor Smith, of Dartmouth Medical College, and found to have glycosuria. This patient had lost five pounds per week for six or seven consecutive weeks, and his debility and emaciation were extreme. The local physicians were justified in the opinion that he could not live two months. I treated Mr. G. seven times, assuring him of his mental control over the manufacture and assimilation of sugar, ordering the retention and conversion of sugar in his body, destroying his appetite for sweets and starchy foods, rendering him tolerant of the diabetic diet, and directing an equable increase in flesh. As a result he steadily gained in weight, strength and activity. Whereas he could not, in early June, follow his horses to the end of a furrow without dropping exhausted to the ground, he hunted with a pack of hounds among the hills, in September, for days at a time without fatigue. Sugar has been absent in this case for seven years, and the patient is in perfect health.

A third patient in consequence of inability to take continuous treatment, was put upon bromide of arsenic, a recognized modifier of nerve perturbation, with the suggestion that the remedy would prove effective without disturbing digestion. After three years this patient wrote that he "is a man again, has got the upper hand of his trouble, and is full of energy and ambition." It is to be noted that these subjects were in an advanced stage of the disease. One of them was passing 8 quarts of urine per diem, with 8 per cent of sugar ($1\frac{1}{4}$ lbs.) and was unable to walk up a flight of stairs, when he came into my hands.

The prescription of an appropriate drug with an accompanying suggestion to the effect that the patient will through its instrumentality insist on the desired result, is the only feasible method of dealing with those who reside at a distance from the physician.

A case of exophthalmic goitre—in a lady from a distant state—was greatly improved by the continuous administration of glycerophosphates and veratrum viride after hypnotic suggestion to the effect that the rational nerve food with the aid of the heart depressant, would, by toning the partially paretic nerves of the orbital, cardiac, and thyroid vessels, reduce the frequency and volume of the heart beat, shrink the thyroid gland, and remove the bulging of the eye. Before the patient left the office, Stelwag's sign (the retraction of the lids whereby the white sclerotic coat of the eye is seen above the iris, greatly exaggerating the exophthalmic effect) had become modified. In the course of three months the pulse was in the 70's and has so remained after the discontinuance of the veratrum. The disagreeable bruit in the affected gland has disappeared, and the gland itself has perceptibly diminished in size. The dominant subjective idea of the patient that she could not do these things was changed into the idea that she could do them—and they were done. The lady continues in a state of health.

In epilepsy, the success of hypnotic treatment depends upon the cerebral state. Nothing can be hoped for in cases where the mental faculties are seriously impaired as the result of organic brain conditions. But much can be done for a weak brain, which constitutes the true epileptic soil, by guarding it from irritation, while improving the quality of its protoplasm. Toxins, products of auto-intoxication, are often the active irritants that excite the seizures, and gluttony may be the cause of the production of these toxins in excess. So in epilepsy dependent upon errors of diet, suggestive treatment is appropriate, in so far as it controls appetite for dangerous aliments.

Seizures that depend on intestinal irritation, hysteria, keeping late hours and other infractions of hygienic law—all arguing a congenital convulsive tendency—are controllable by suggestion. Patients can be made in this way to respect such a tendency, and by right living to prevent the development of minor types of

the disease, unaccompanied with convulsions, into incurable forms.

Nothing here said implies any disparagement of the colony treatment for epileptics, so ably projected and perfected by Dr. Spratling, of Sonyea, N. Y.

The writer has successfully treated hysterical mania by suggestion. This affection often has its origin in an unfortunate love affair, and manifests itself in paroxysms of maniacal excitement in which the patient becomes seemingly uncontrollable, screams, bites, scratches, pulls hair, assaults those about her, and pours out a torrent of profane and indecent abuse. Such patients are suspicious, unreasonable, self-willed, imperious, inflammable, explosive; and during the continuance of an attack may be adjudged to a degree irresponsible, for there is no crime some of them would not commit. Generally, they can resume control at a moment's notice. One young woman whom I was called to treat, after spending the afternoon in beating her mother and battling with the nurse like a virago, would, when gentlemen were announced, at once recover her equanimity, prepare for dinner and preside with charming poise and self-control. There is usually an element of perversity in all such manifestations, to which discipline is as applicable as is suggestion to the psycho-neurosis.

Suggestion has further proved of avail in habit pains, tremors, and other nervous expressions, in habit spasms and in occupation neuroses, as when the lip muscles of cornet players and whistlers lose their strength; in hysterical contractions and torticollis, with painful spasms of the neck muscles; in profuse sweating (hyperidrosis); in unnatural appetites which affect rags, pencils, tea leaves, clay, etc.; in the nervousness of children accompanied with enuresis, twitching, throwing themselves about the bed, sleep talking, sleep walking and distressing dreams. Habit pains are often the result of hallucination; as such they are manifestations of mental pathology, and suggestion is the only rational cure. When the patient is convinced that there is no organic reason for their existence, they disappear.

Gluttony with pronounced embonpoint also yields to psychotherapy. Opsomania, or uncontrollable craving for certain articles of food, is not an uncommon condition. Among the opsomaniacs who have applied for treatment are: A lady who took up cooking and became a glutton, to the wreck of her health; a gentleman with an irresistible craving for chocolate bonbons; and a young man who described himself as "handicapped by a constant desire to eat." His mother, prior to his birth, would scour the markets for choice grapes, peaches and other delicacies, and he believes that he has inherited a longing for these same things which leads to periodical indulgence. For a week at a time he is able to control himself; then, like a dipsomaniac entering upon a debauch, he gives way and goes to excesses that are prejudicial to his physical well-being. In another case where a prospective mother not only craved prohibited articles of food but actually stole them, the child that was born was kleptomaniac as well.

The *bonne bouche* habit is widespread in America; in fact, the greatest enemy of the health of our young women is the manufacturer of fancy confectionery. The natural liking for candy, under the stimulus of his combinations of chemical flavors, terra alba, and glucose, develops into a craze, with the natural consequences—indigestion, mental indolence, chronic gastric catarrh, and, most to be deplored, a fetid breath, which renders the possessor positively odious.

The following suggestions are applicable in cases of obesity:

Excessive fat is an error in metabolism which you have power to correct. The revenues of your body consist in food (solid, liquid and gaseous), and these are expended in the generation of heat and energy. Your income at present is in excess of your outlay, so compensation is destroyed. Your organism does not burn up food introduced to excess, but lets it accumulate as fat. The remedy lies in the increase of muscular work and the diminution of fat-making foods, of nutri-

ments of high heat value. This remedy you will apply at once, in combination with outdoor life and exercise, massage and Swedish movements. Thus you will free your body from superfluous fat without impairing the integrity of the muscle substance. And you will gradually increase the amount of work you are doing—either by gymnastic exercises, walking, riding, rowing, billiards, golf, tennis, bowling or fencing—and gradually lengthen the time devoted to such exercises.

You are no longer fond of sugar or starchy foods, like potatoes, rice, hominy, beets, pies, puddings, cakes, and confectionery, nor of fats like cream. You will diminish the amount of fluids taken, especially at meals. And you will completely digest what food you do eat, approving and enjoying the prescribed diet.

So the beauty of your figure will not be marred, the action of your heart and lungs will not be interfered with by accumulations of fat and there will be no fatty degeneration to fear. You will see then that the fat you complain of disintegrates and is absorbed, and that a nutritive equilibrium is established.

By this it is not implied that suggestion will suddenly convert every fadge into a fairy, but it certainly will prove an invaluable factor in the treatment of corpulent persons who are intelligently persistent in their efforts to reduce flesh.

There are many other physical conditions in the treatment of which suggestion is a most important auxiliary—none more amenable to its uplifting influences than nervous exhaustion.

Although not an American affection in its origin, neurasthenia is peculiarly American in its distribution—the headlong rush and overwork, the excessive brain strain required in all departments of public and private service with their jarring competitions, the emotional excitement connected with failure and success, the slavery to social obligations and pleasures so characteristic of American women—constituting a soil peculiarly favorable to the development of its symptoms and sufficiently accounting for its widespread exist-

ence in this country. American fashionable and business life is a continuous nerve storm—a literal hurrying to the grave. Americans speed their automobiles along every conceivable life way, exhausting their physical energies as they go, and inviting premature nervous and mental death. Add to this the hundred and one modes of overtaxing the physical organs forced upon society by this imperious civilization, in many instances without alternative, coupled with the fact that so many are born with unstable nerve cells and not a few nervously bankrupt, and it is not difficult to understand why fifty per cent of our people are suffering in some degree from lowered nerve tone. The calm of a generation ago has given way to din and jostle and unrest; it can no longer be found at the resorts, nor on the ocean steamers; only amid the seclusion of an abandoned farm, or in the forest, may the silence cure be applied. What with the cruel noises of the streets, countenanced in modern business, and standing for so much ear strain; the irritating electric lights of the office and the home, exciting through the eyes mental and nervous affections, notably in the case of eyes with uncorrected refractive and muscular errors; the insanitary apartment and flat life, utterly destitute of the psychic factors that make for general well-being in the old-fashioned home; the wrong methods of study that prevail at institutions of learning, especially for women; the carelessness in diet and general hygiene; the life that is all work and no play, or all play and no work, both narrow, monotonous, infertile, unhappy; the life that is given to gambling, whether at bridge or poker, betting on races, or chancing at lotteries and stocks; the trying and unhealthful modes of transportation including automobiling, with its tendency to mental intoxication; the senseless bolstering of shattered nerves with alcohol, drugs and patent medicines; the abuse of hypnotics, a great cause of insanity; the vitiated air we are compelled to breathe in highway, house and public conveyance, rife with unwholesome odors, smoke, dust and micro-

organisms—what with all this, mere living in the twentieth century amid its whirl of worry, work and dissipation, constitutes a sufficient excuse for exhibiting symptoms of its most fashionable disease. The best of nerves have little chance to maintain their integrity.

And then there is food adulteration. It is notorious that during the last ten years food substances have been steadily deteriorating through sophistication. The demands on nervous vitality have, as shown, markedly increased; the elements of nerve nutrition in the machine-made food stuffs and substitutes the mass of people live upon have as conspicuously diminished. Nerve work has been doubled, nerve food has been halved; and the half that is left to the consumer is liberally tinctured with poisons.

The rational method of treating neurasthenia is to feed the cell that is hungry and rest the cell that is fagged. If the rest be made long enough, the food sufficiently strengthening, the sleep regular, the change of employment judicious, and all worry removed, most cases of this condition may be greatly improved, if not entirely cured. The trend of the objective treatment is wholly in the line of nutrition and repose.

The psychic treatment consists in suggesting confidence to the patient and making him believe that he is curable—that his disorder is purely functional, and that there is no organic obstacle in the way of his immediate betterment—that there is a time ahead when he will be entirely well again; but that he must have faith and patience, and not be discouraged at the chain of relapses which mark the course of the disease. The difficulty is to induce him to continue for a sufficient length of time the measures that will restore him to health. Discouraged by the slowness of his progress, he is prone to consult a new doctor every week, and embark on a new line of treatment. He is loth to believe that the history of emergence from his condition is a history of unaccountable setbacks—that, to quote the Piscatory Eclogues, "He is bound to heaven, but by way of hell." It is the part of

the suggestionist to make him willing to do the things that will keep him on the road to recovery; to remove worry and all morbid feeling; to secure refreshing sleep, and cheerful awakening without tension or depression, to render the experiences of each day sources of gratification that add their quota to the reserve fund of nervous energy and subtract nothing from it; to paint life with a new look and a deeper significance; and to awaken in the patient an apprehension of himself in his relationship to Deity and destiny. And when he gains a higher plane, he should be instructed to obey strictly the laws of work and play and diet that he has discovered to be good government for him; to administer his nervous resources conservatively, so living as "to give reasonably play to all his powers and to extract from the world of nature and men by which he is surrounded the largest number of wholesome and delightful reactions."

In other cases life may be saved through the evocation by suggestion of a psychophysical control, adequate to the arrest of exaggerated destructive metamorphosis, the re-establishment of the processes of repair, and thus the carriage of the patient safely beyond the point of culmination which prognosticates recovery or death. Further, at the very moment of dissolution, the quality of suggestibility is at its maximum. It is not generally known that suggestions given as death actually impends have a power unparagoned in the gamut of mental states. This is due to the fact that the results of suggestional inspiration bear a distinct relationship to the degree of isolation from brain and sensory activities, and this degree climaxes at the moment when the spirit has all but abandoned its corporeal investiture. Then the ego—the simple, perdurable, immaterial man—is focussed in every phase of its personality and all the panoply of its powers. Then it may respond to the imperative call of confidence and faith to reinstate its psyche in a body dying or practically dead—*provided* there be no such lesion of tissue or organ as

to preclude the fulfillment of any vital function. For the human spirit can be made to do anything that is physically possible and morally right, if inspired to act by a complementary personality in whom it centers respect and confidence. To be sure, it will not heed the cry of fad-ridden dreamer, or do the bidding of shatter-brain, who, ignoring the ravages of malignant disease, demands a miracle. It is susceptible only to suggestion by those who are acquainted with the possibilities of the case and the natural history of the disorder in question, and who, *knowing these*, know also how to ask for the intervention of the spiritual self in behalf of a prolongation of its own terrestrial existence. It would be the part of a fool to demand of this self regnant the reanimation of a frame rendered incapable of living by the necrotic changes of tuberculosis or the degenerated kidney structure of Bright's disease.

The method would further avail in many cases of drowning, of shock either from concussion or fright, of poisoning by gases and narcotic drugs, of swoon and trance. The possibility of saving life in this rational way should be understood by all who serve the sick and minister to the dying. Even in cases where death is inevitable, the passage from this world into eternity may be rendered painless and happy by wise suggestions earnestly offered. The human self has power to obliterate all the suffering attendant on the dissociation of body and spirit.

My time limit forbids anything more than reference to the appositeness and potency of suggestion in the treatment of delusions, exaggerated worries and hallucinations; of remorse for supposed unpardonable sins; of morbid fears, apprehensions and doubts; of unlawful infatuations and uncontrollable impulses; of hauntings by phantoms, persecutors, and preposterous notions; of psychoneuroses and incipient insanity. Among my patients have been persons who could not cross the threshold and go out into the street, who could not board a car or sit on a ferryboat, who could not ride in a public convey-

ance without the most mortifying exhibitions of self-consciousness, who could not wash and dress themselves or comb their hair, or mend a hole in a stocking without weeping; who could not sleep under a bed-quilt; who could not look in a mirror, who were the victims of imaginary love affairs; who were morbidly afraid of dogs, water, thunder storms, microbes, roofs, cellars, certain colors; who could not fulfill literary contracts because of inhibitory influences difficult to explain.

The subject is often aware that the imperative notions are morbid, that he is the dupe of delusions, but he cannot control them. He may be of amiable disposition, and yet be haunted with an impulse to pick up a hatchet and kill somebody. I successfully treated such a patient, who contracted the diseased inclination from reading of a similar case in a newspaper, recognized the wrongness of it, and was able to resist it, but it had so far taken possession of his mind as to render him unable to discharge his duties as a bookkeeper. A lady to whom I gave counter-suggestion, was obsessed with the idea that she must shoot somebody in the back of the head, and was unable to sit in an audience because overwhelmed with a passion to fire at the backs of heads in front of her. The atrocity-mongers of sensational newspapers by their revolting exaggerations of vicious and criminal deeds, have not a little to do with the induction of these harrowing states. Sensitive subjects apply what they read to their own cases, often feel impelled to act accordingly, and are prostrated with fear lest they be tempted to commit similar crimes. A neurasthenic patient was haunted by a coarse word which she saw scribbled on some fence. The word was ever on her tongue, it had become the one subject of her waking thoughts and her dreams, and she was tortured by the fear that she might lose self-control, utter the indecent expression in church or drawing-room, and be ostracised in consequence as a vulgar harridan. This is not insanity; it is likely to be the portion of any refined human being whose brain organs are overworked,

and are, hence, pathologically impressible. Nothing but suggestion can immediately remove such an obsession, and restore happiness to a crushed life. Sometimes a single treatment suffices.

A common delusion is fear of approaching insanity, with no ground whatever for the belief. Another is the hearing of sinister voices that urge through imaginary telephones the commission of horrifying acts. There is a humorous as well as a pathetic side to some of these abnormal thought forms. A physician recently under my care conceived an uncontrollable fear of microbes. Wherever he went, he was brushing them from his clothing. His hands were incessantly in soap and water, and he soiled fifty napkins daily in desperate efforts to wipe micro-organisms off the glassware and crockery. His wife was unable to keep a servant in her employ, and his practice had gone by the board. Another physician, without the slightest ground for apprehension, was persuaded that he was about to develop diabetes. He made a dozen analyses daily to detect the expected presence of sugar. He never left home without apparatus for analyses in his satchel. He dreamed of nothing but test tubes and Fehling's solution and talked continually in his sleep of orange-hued precipitates. The sight of sugar, candy and starchy foods threw him into paroxysms of nausea, and he selected his diet with the care of a confirmed diabetic. Although assured by numberless specialists that his fears were unwarranted, he clung tenaciously to the *idée fixe*. This patient has long ago forgotten his diabetic delusion.

Even hard-headed business men become the victims of ludicrous obsessions when nervously depressed. A young fellow of marked ability applied for the cure of an irresistible impulse to throw himself into the arms of every corpulent woman he saw and be hushed off by her to sleep. The pressure of this outlandish inclination had become so agonizing that he had planned to escape from it by suicide. Such conditions yield to no human treatment except that by suggestion.

In the case of more serious mental disturbance, there is no doubt that much good can be accomplished if it be treated in its incipency. Hallucinations, exaggerated worries, unreal anxieties, hypochondriacal fears, various forms of morbid disposition, infatuations and extravagant passions that are quite sure, unless removed, to gravitate into permanent aberrations, may be held in abeyance by congenial suggestions until the mind regains its poise. It is generally conceded that asylums for the insane are filled with inmates who might have been saved from such an entombment had they been thus opportunely treated.

My own experiments have had largely in view the application of suggestive treatment in cases of moral obliquity and in the development and exaltation of mind power. Let me here insist that it is because supersensible ethical force is potential in every human being—it is because men are not sinners by constitution—that successful appeal may be made to the transliminal self in states of unstable moral equilibrium. It is because the image of God cannot be obliterated in the man by the most revolting depravity that the criminal and the degenerate are alike susceptible to the quickening suggestions of him, who, to borrow the words of the Roman moralist (Seneca: *De Ira*), is angry with the sin, but not with the sinner. Assuredly there is no man or woman, however desperately enthralled by wrongdoing, who is not capable of regeneration and of moral greatness. In the worst of characters there lies imbedded virgin gold that may be found for the seeking and fashioned into exquisite shapes. Man's earthly nature is never inconsistent with the indwelling of the Divine, and to restore the image of God to its full glory in the darkened life is the sole aim of my treatment for moral disease.

The cases of moral import successfully dealt with include:

Cigarette addiction and the disturbed mentality of nicotine poisoning.

Drink and drug habits.

Kleptomania, habitual falsehood or pseudo-mania, hopeless dishonesty, mania for swindling, pawning and gambling.

Sexual aberration.

Disobedience, viciousness and degeneracy in children.

Spiritual inability and general moral impotence.

The readiness with which these conditions yield to the power of the suggestionist—the fact that human character may be transfigured in a single hour by a human instrument—is most awe-inspiring. It forces a momentous issue, "Where lodges the responsibility for a sin-serving world?" I remember to have read in Quintilian's "Institutes" that as Nature has formed man with honest inclinations, and as it is hence so easy to be virtuous, the prevalence of wickedness is more than astonishing. The old Spanish rhetorician struck the keynote of the situation. Thoughtful persons are still inquiring why the state of man is so wretched when his constitution is so excellent.

My experiments with the moral defective, whose parents often represent high types of morality, but whose own moral organs remained in an embryonic state up to the time of treatment, conclusively prove that hypnotic suggestion may undam the currents of ethical impulse in such a life, and flood it with a stream of moral energy—not uncreate, but until the hour of inspiration wholly potential.

Man in his higher personality is adequate to the extirpation from his objective nature of any abnormal craving or passion, like the craze for alcoholic drink. Dipsomaniacs, as a rule, and I have treated 1,000 cases by suggestion with 80 per cent cures, are easy subjects, in that they yield readily to the suggestional influence, and accept unconditionally the directions communicated by the operator. Regular drinkers may be dealt with whenever they can be induced to sober. Periodic drinkers should be treated just before the close of the cycle of sobriety. Regularly recurring debauches have periods of varying length, the longest in my experience being three

years; and I have satisfied myself that in 75 per cent of drink habit cases, a relationship exists between the abuse of tobacco and the oncoming of the irresistible thirst, the depressing effects of the prussic acid, carbon monoxid and pyridin bases contained in tobacco smoke instinctively suggesting recourse to the antidote. Periodic drink storms are usually forecast by significant indications, well known to the family and friends of the victim—irritability of temper, unreasonable suspicion, abnormal restlessness, unaccountable depression. Immediately upon the appearance of these symptoms, the patient should be treated by suggestion, before opportunity is given for indulgence of the craving. Such a subject frequently recognizes his danger, and sincerely wishes to be cured. He is tactfully conducted into the subliminal sphere, and then assured that in accordance with his own desire and decree, he has lost all craving for beer, wine, whiskey; that alcohol in any form will disgust him, and, as a safeguard, that he cannot swallow it, cannot carry the containing glass to his lips. The society of low companions is tabooed; the pleasures associated with drink and the glamour of the bar-room are pictured as meretricious and placed in vivid antithesis to the chaste delights of home life. The physical, mental, moral and economic bankruptcy that accompanies dipsomania is held up before the view of the sleeper, and he is forced to the conviction that begotten of this apprehension has come into his soul an abhorrence for drink and all that it stands for. He realizes the presence of efficiency within him adequate to the enforcement of radical abstinence as the principle of his life; and he is rendered insensible, for the future, to any such combination of passion and allurements as has usually constituted temptation. So he is led instantaneously to scorn recourse to alcoholic stimulants, or to extrinsic exaltation of any kind, either for convivial reasons, or in time of depression, misfortune, or sorrow; and to depend exclusively, under any mental or physical strain, on the units of energy legitimately manufac-

tured out of nutritious food, non-intoxicating drinks, air, exercise and sleep. The subpersonal mind is then directed to the vocation or the avocations, or both, as circumstances suggest, and a career of wholesome activities and satisfactory success is imaged as the legitimate result of the abandonment of the compromising habit.

The success of this treatment bears a distinct relation to the amount of injury already inflicted upon the brain cells and the accompanying mental deterioration. Its advantage consists in the rapidity of restoration to self-control without the necessity for effort of will, without the physical discomfort or suffering that usually attends abandonment of the habit, and, most conspicuously, without the breaking of family ties and the enforced absence from professional or business duties that are implied in sanatorium treatment.

In all hypnology there is nothing more thrilling, and to the novice more incomprehensible, than the evocation of natural endowment by suggestion—the sudden awakening of dormant genius. Yet the inspiration of an actress, for instance, while in the appropriate sleep—the quickening of her confidence in her powers of impersonation, the effacement of all admission of inferiority, the emphasizing of her native dignity and grace, the pushing of her individuality into strong relief—is possible of accomplishment to one who understands the mechanism of the mind and the laws of dramatic art. An actress so inspired is anything but a soulless Trilby.

Numbers of men and women with musical gifts have applied to me for the translation of latent into actual talent. In such cases, an appeal is made to the *subliminal self* along the lines of fearless utterance, through voice or instrument, without diffidence, without thought of extraneous criticism, with force, and feeling, and dramatic ardor. Ability is imparted to read at sight, to interpret contents, and to render the thought or emotion through the medium of piano tones evoked by dexterous fingers or of laryngeal instrument handled with consummate grace. An

improvement is at once noticed, marked by facility in interpreting new and difficult music, by a sureness and delicacy of touch, and, above all, by the acquisition of perfect confidence before an audience.

Unquestionably the most important advance made by psychology during the nineteenth century was its assumption of a practical character. In no direction has this salutary evolution been more conspicuous than in the recent utilization of psycho-therapeutics along the lines just discussed. And the end is not yet.

If high purpose and noble endeavor may be substituted in character for carnal propensities and sordid aims, worthy ideals for bestial standards, intellectual brilliance and living interest for obtuseness and indifference, then most unquestionably, through the transmission of automatic impulses to right-doing for a few generations, it is possible by concerted philanthropic effort perceptibly to diminish crime. In educational work the value of suggestion can hardly be overestimated. Child study, from the standpoint of its application, is a duty of the hour which can no longer be excusably ignored either by teachers themselves, or by those whose life work is the preparation of teachers for a profession demanding the highest intelligence and involving the greatest responsibilities. Not only may dull minds be polished, unbalanced minds adjusted, gifted minds empowered to exploit their talents, but the educating intellect of the school child may tread that royal road to learning which ancient philosophers sought for in vain; the matured mind of the scholar may be clothed with perceptive faculty, with keenest insight, tireless capacity for application, unerring taste; and the imaginative mind of painter, poet, musician, discoverer, may be invested with creative efficiency in the line of ideals that are high and true. Judicious suggestion accomplishes the output of indwelling faculty, and the lesson of hypno-science here is a lesson of man's susceptibility to limitless progression. I firmly believe that as

an agent of physical cure suggestion will shortly come to be universally employed by trained nurses for the purpose of carrying their patients through the crises of disease. It will be used by physicians for intra-uterine inspiration, the character of the forming child being determined by antenatal suggestion. The influence of maternal impressions upon the nature of an expected child if not perfectly understood, is universally admitted. The dominant ideas, delusions, and imperative fears of prospective mothers that menace the moral or mental health of self that are yet unborn should be eradicated without delay by the most careful treatment. Conversely, it is possible through the same instrumentality to stimulate the intellectual germs, shape the moral propensities, and so determine the ethical and mental destiny, as well as the mere physical constitution of the child awaiting birth. The possibilities of physically, rationally and spiritually elevating the human race through this channel alone become infinite.

Intelligent physicians will anticipate by such treatment an inherited tendency to malignant growths, fortifying through the channels of suggestion the system of the subject against any chemical, mechanical, or emotional cause for the development of cancer. Carcinoma, for instance, being rare under thirty, the physician of the future will keep up the vitality of the threatened tissues, in cases when heretage is suspected, by powerful suggestions to the subpersonal mind, begun at the age of twenty-five. Suggestion may further be used to regulate fecundity, and so control the population of the earth. Such promises to be the development of the twentieth century, while hypno-physics seems further destined to discover the laws that govern telepathic intercourse, to determine the possibility or impossibility of human communication with discarnate beings, to effect that adjustment with natural law which will banish disease, and to give us euthanasia as the fitting close to every human life.

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TREATMENT OF SIMPLE FRACTURES*

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Until recently all that was aimed at was to obtain firm union of fractures, while anatomic effects received only secondary considerations. Now much more is required—not only good union but good functional and cosmetic results. The introduction of the X-ray as an aid not only to diagnosis but also in treatment of fractures, has raised the standard of requirements, perhaps unnecessarily too high. It is in this striving towards perfection that the open or operative method had its origin.

Let us in the next few minutes investigate the teaching on this subject and show how unsettled surgical opinion is expressed.

Mr. W. Arbuthnot Lane, of London, makes a strong plea for operative interference in all cases of simple fractures, in which he claims it is important to the individual that his mechanics should not be impaired by the injury. The advantages he claims by this method may be briefly stated as follows: "Relief of pain from movement of the fragments, removal of tension and discomfort due to extravasation between and into the tissues, shortening of the period of disability, and restoration of the injured bone to its former condition." He lays great stress on the last named advantage, because of his conviction that ordinary treatment with splints only rarely gives accurate apposition of the displaced fragments, and that persons who have sustained fractures, especially of the leg, only too often experience enormous physical disability. These conclusions, he states, have been reached by an abundantly large experience. According to Lane, treatment by ordinary methods, "anything approaching accurate apposition of displaced fragments in a fracture is obtained only in

rare cases," and the treatment of fractures by what he calls the old methods is a disgrace to surgical practice.

Dr. Lewis A. Stimson, of New York, thinks that accurate adjustment of fragments is of no great value unless it can be maintained and that this maintenance by suture or other direct fixation is at the best uncertain. In the *International Journal of Surgery* for July, 1909, he is quoted as claiming, that in the "alleged advantage of operation for removal of interposed soft parts or small bone fragments, the percentage of failure of union in all cases from this cause is probably not more than 1 to 2 per cent, and even in the majority of these some unknown factor, rather than the interposition, is responsible. In regard to the claim of an ideal restoration of form by the operative method, he thinks that most of these moderate departures, unsightly as they may appear in the skiagram, cause no functional and little or no cosmetic loss. The alleged gain is not only more sentimental than real, but also in fact unobtainable." For these reasons Dr. Stimson reserves operation only for those cases in which gross displacement cannot be otherwise corrected.

Dr. J. B. Murphy, of Chicago, claims that the results from the treatment of most fractures are unsatisfactory; first, from neglect by the attending surgeon; and, secondly, from the imperfect understanding of the conditions of the individual fracture. He claims bad results in their order of frequency, in Colles', in Potts, in every fracture of the neck of the femur, in fractures of the patella and in those of the olecranon. He cites, for instance, Colles' fracture, claiming the bad results seen

*Retiring President's Address, delivered at the annual meeting of the Nashville Academy of Medicine, April 5, 1910.

are not due to the fact that the bones cannot be kept in position, but to the fact that the bones are not properly reduced in over 95 per cent of the cases. He claims that many cases demand operation for direct fixation, and advises not to operate too early, but wait until the fifth, tenth or fifteenth day, as the danger of infection is much greater on the first and second day after the accident—from the fact that the lymph spaces have become coffer-dammed and the new capillaries are developed to the greatest resistance against microbic invasion.

Professor E. Lexer, a distinguished German authority, believes that the operative treatment of simple fractures will always remain a limited field, being especially indicated in fractures of the patella, of the olecranon process, fractures into or in the neighborhood of joints with marked displacement and difficulty of reduction, and also in fractures of the shaft of certain bones which cannot be properly reduced or which are impacted, but in these only after attempts to obtain union by other means have failed.

The great French authority, Professor Lucas-Championniere, of Paris, believes more in graduated massage than in immobility as a principle of treatment. In the *Lancet* of June 12, 1909, he claims that a certain amount of movement between the fragments occasions boney union by stimulating secretion, and further holds it is unnecessary to attempt exact coaptation as massage will correct the same. This authority maintains that a moderate degree of shortening which does not interfere with the static position of the limb is favorable to repair. Sir William H. Bennett, of London, is an enthusiastic advocate of Prof. Championniere's method, and proposes to rely on this plan exclusively, even in the treatment of an intracapsular fracture of the neck of the femur.

At the last meeting of the A. M. A., Dr. E. D. Martin, of New Orleans, read a paper in the Surgical Section entitled "A Plea for the More Careful Diagnosis and Treatment of Fractures of the Extremities," which was fully

discussed by some of the most eminent surgeons in America. The *Journal of the A. M. A.*, in its December 18, 1909, number, publishes a full account of the discussion of this paper, from which we quote the following:

Dr. C. L. Scudder, of Boston. The operative treatment of recent closed fractures is a very vital subject, surprisingly suggestive, full of interest to every one. We all believe in the operative treatment of certain fractures, provided the indications are unmistakable. Operating on freshly fractured bone is today safe if the operative technic is perfect. Osteitis and necrosis do not commonly follow properly placed direct fixative materials—wire, nails, pegs, plates or screws. Union of the fracture is usually facilitated and not delayed by operation. Damage to the soft parts extensive enough to cause postoperative difficulties may be avoided and is not a menace. The local conditions surrounding a recent fracture are quite different from those discovered at the seat of an old fracture.

In our enthusiasm for operative victories we must stop and ask ourselves, are we securing from the non-operative treatment all that we possibly can? When should we employ operative measures? What should be the general indications for operation?

Deficiencies in non-operative treatment, which unquestionably do exist, should be remedied, not by operating more frequently but by exercising greater care in the employment of the fundamental principles recognized the world over as underlying the treatment of all fractures, namely, general anesthesia, traction, counter-traction; pressure, counter-pressure; the exact application of anatomic knowledge; immobilization; the comparative use of the Roentgen ray; massage; the care of joints adjacent to the injury, and, ultimately, the securing approximately anatomic form and perfect function. Whenever and wherever these basic principles are applied intelligently and consistently, the results are uniformly good and the operative margin is then narrow. Bardenheuer, in Germany, has demonstrated the efficiency of non-operative methods. Even though

Eardenheuer's details may be too cumbersome for general use, he has proved that results following the consistent employment of non-operative methods are satisfactory. That non-operative measures are efficient in the treatment of the vast majority of fractures has been proved in this country over and over again in hospital and private practice. Many facts in corroboration of this statement have been recently collected by DaCosta and others, and are still being assembled, and are worthy of consideration. I want to dissuade any one from believing that an anatomically perfect result following a fractured bone is absolutely necessary to a functional useful limb, or is necessary to the individual. Approximate reduction, that is, non-anatomic, is followed by union and by a functionally useful part, and by no apparent deformity to the patient or his non-professional friends. Operation does not carry with it or imply the guarantee of a perfect anatomic result. The majority of simple or closed fractures can be satisfactorily treated by non-operative methods. The broad indication for operation, in my opinion, in recent closed fractures, in the absence of great damage to soft parts, including vessels and nerves, is the inability to bring fragments into apposition and into good alignment. Let all surgeons bestow as much thought and personal consideration on the non-operative methods in the treatment of fractured bone as the importance of the subject demands, and our non-operative results, good as they are, will improve, and the number of operable cases will increase slowly and only for good and sufficient reasons.

Dr. A. J. Ochsner, of Chicago: My ideas on the treatment of fractures are pronounced. In certain fractures, like that of the patella, the anatomic conditions are such that the results, even with the best non-operative treatment, must be bad. There are other considerations in which these conditions must be bad, but with the exception of these conditions, if we employ certain definite principles, the results must be good. Of course, if we do not teach our assistants that a fracture held

by plaster of Paris in a deformed position is sure to heal in that position, we must expect to get bad results. If we do not teach our assistants the proper use of splints and the proper methods of reduction of fractures we must not look for good results. But if a surgeon with good judgment and with experience in these principles will employ them, the number of cases in which the operative treatment should be employed must be very small.

Dr. Leonard Freeman, of Denver: There are two kinds of fractures which seem to demand operation, providing the surroundings are perfect and the operator is competent. In one kind we are unable to reduce the fragments at all; in the other, although we are able to place the bones in apposition, they have little or no tendency to stay there.

Dr. John B. Walker, of New York: I believe that our knowledge of the treatment of fractures in America has not advanced so rapidly as it has in the treatment of abdominal and other conditions. A few years ago a leading London surgeon attempted to ascertain what was the ultimate or end-result in these fracture cases, and he sent out many letters to which he received 400 replies. He found that what was called satisfactory in London was not so regarded in the outlying districts. In the large cities the duration of the treatment of a fracture of the femur was from four to six months, whereas in the outlying districts it was from six to nine months. Since the introduction of the X-ray this matter of the proper treatment of a fracture has become a personal and important one to many surgeons. Last year the largest liability accident insurance company in this country showed that out of 100 suits for damages, 75 per cent were brought on account of surgical conditions, and the remaining 25 per cent on account of medical conditions. Of the damage suits brought against surgeons, 75 per cent were on account of deformity following the treatment of a fracture. Only a year ago Mr. Lynn Thomas, a British surgeon, was sued in a case of fracture of the surgical neck of the humerus. The case passed from one court

to another, and at the end of a year the damages allowed were over \$20,000. As Dr. Ochsner said, the statistics in our large hospitals show that, as a rule, fractures are treated by young men who do not receive any instruction from the surgeons, but from previous house officers. In the large New York hospitals, when a fracture of the neck of the femur comes in, for instance, the patient has to stay for twenty-four or forty-eight hours, when he is sent to other hospitals, because the hospital wants to get rid of these cases. The result is that these patients come in with much shortening and go out with considerably more shortening.

Dr. W. L. Estes, South Bethlehem, Pa.: While I believe that in this matter we should be rather conservative, there are some fractures that, one might say, must almost invariably be treated by the open method. I have come to the conclusion as the result of considerable experience that there are certain localities where certain fractures require an open operation. The first of these is fracture in almost any part of the shaft of the tibia, when the fracture is very oblique, with no shoulder to hold it, making it impossible to keep the fragments in position by any ordinary mechanical means. My observation of the result of other surgeons' work and my own experience has taught me that no splint or mechanical contrivance will accurately reduce and retain these fractures in proper apposition without the open method. In this day of the X-ray not only must the usefulness of the limb be thought of, but also the cosmetic effect. The public demands that we treat these fractures of the extremity in a way to retain the appearance as well as the usefulness of the limb. To do this it is necessary that we perform an operation when the condition and the surroundings of the patient are favorable. In regard to methods of fixing the fragments in an open operation, it does not matter so much what apparatus we use so long as we do the work under proper asepsis. Either a clamp, or a screw, or a splint, applied directly to the bone, will answer the purpose.

I am opposed to any method, however, which will not enable one to see whether the fragments are in apposition. One may think that he has the bones in apposition, and put on a splint, but when the X-ray is used he finds, much to his surprise, that there is malposition. Hence the importance of an incision down to the seat of fracture, complete exposure and accurate coaptation of the fragments under the eye and then firm fixation.

Another fracture which should be treated by the open method is fracture of the junction of the upper and middle thirds of the humerus, where the musculospiral nerve is so apt to be injured. The danger of the injury is in proportion to the violence that has been done by the ends of the fractured bone. The nerve may not give any evidence of injury immediately, but within two weeks there may be paralysis. The explanation of this late development is that one end of the displaced fragments may press against the nerve, and the developing callus does the rest. Another fracture which requires the open method is that of the inferior maxilla. These fractures are nearly always compound, and they require drainage as well as accurate replacement and fixation, hence the open method should be employed.

Dr. Rudolph Matas, New Orleans: It does not follow that all fractures are better treated by operative methods or that good results cannot be obtained by bloodless manipulation. Surely practitioners of surgery cannot accept the X-ray standards of bone setting as the sole and absolute criteria of successful treatment. We who teach surgery, while fully recognizing the great advances brought about in the treatment of fractures by open methods of reduction and fixation, must remain in sympathy with the view which holds that when a broken bone is set without any visible deformity, and is followed by no abnormal disability, such a result must be regarded as a good result, even though the X-ray may show some displacement or imperfect apposition of the fragments. Judging by this simple standard, there is no question that a vast number, the ma-

jority, of fractures of the extremities can be successfully treated without operation. It is only right that the art of bone-setting by bloodless manipulation should be cultivated and encouraged more than ever as an essential part of the surgeon's training. On the other hand, when it is evident that reduction is impossible and that deformity with impaired function is unavoidable in any given case of fracture, there should be no hesitation in resorting at once to the open treatment, provided all other conditions, including the operator's training, are favorable to the procedure.

Dr. Charles A. Powers, Denver: I believe that open operation in simple fractures will be performed more often than it has in the past, but also that open operation in simple fractures will be the exception rather than the rule. As I look back over my own results in simple fractures treated without operation I feel that they have generally been satisfactory. I do not think the results in these fractures, when carefully treated by established methods, are notoriously bad. I am entirely in accord with Dr. Scudder. He expressed my position clearly and thoughtfully. Further, Dr. Ochsner is right when he says that in our routine hospital work we are too prone to leave the treatment of these important cases to internes of but little experience. If we pay proper attention to suitable non-operative management we will have fewer cases which demand operation.

Dr. DeForest Willard, Philadelphia: Surgeons differ widely in their advocacy of operative or non-operative treatment in fractures. Dr. Martin called attention to the question of diagnosis. There is at present no reason for failing to know whether we have succeeded in the replacement of fracture. The Roentgen ray will tell us all this. It is not only necessary to reduce the fracture, but to keep it reduced. There are certainly a large number of simple fractures that do not require operative treatment, but there are cases in which it is necessary to resort to operation, *i. e.*, those in which reduction and retention are impos-

sible. Fracture patients often come to the hospital and they are not seen by the surgeon at all. They are treated by the house officers; they are sometimes treated carelessly, and a bad result is sure to follow. We all have reason to know the annoyance that comes from a malpractice suit, and the Roentgen ray is adding to our troubles, because while many cases are functionally perfect, they are not anatomically perfect, and a jury is readily influenced. The Roentgenogram is only a shadow and not the thing itself. Look at your own shadow as you are walking on the pavement. It is not at all like yourself.

Dr. Robert F. Weir, New York: We have been told, and correctly so, that fractures are hard things to treat. They tell us also that in hospitals they are badly treated because the juvenile interne does the treating. That is true, but there is another reason which has not been mentioned why there are so many cases of malpractice. Malpractice suits are brought against the physicians who are only occasionally surgeons. The majority of cases should be judged not by hospital treatment, not by the treatment given them by the general practitioner, who, with the aid of the misinterpreted X-ray picture, is so frequently sued, but by the outcome of the cases treated by a competent surgeon, cases that the latter treats in his private practice. As I look back on my cases of fracture, I must say that the majority of them have terminated in a very satisfactory manner. I do not mean to say that some of the patients have not had deformities, but the individuals have been able to go about and use the extremity. The result has been satisfactory and would more than counterbalance the risk of an open operation. A Philadelphia surgeon many years ago remarked that anti-septic surgery is not cock-sure surgery even in the hands of the best men. This is yet true. If I had a fracture of the patella I certainly would not have my knee-joint opened and the fracture sewn up. I would take my chances the other way and believe that I would come out pretty well. King Edward's patella was treated bloodlessly and wisely.

Mr. W. Arbuthnot Lane has failed to impress his radical views on but few, and it is not to be wondered that such teaching would be rejected when he continues to present radical views, another illustration occurred before the last meeting of the American Surgical Association at Philadelphia, when he advocated in a paper on Chronic Intestinal Stasis, relief by division of the ileum at its junction with the lower part of the large bowel. When painful symptoms are much in evidence he removes the large bowel. Astonishing as it may seem, there is not a well-known surgeon in America that advocates Mr. Lane's views. Dr. William Fuller, of Chicago, in the September number of the *International Journal of Surgery*, does present quite extreme views, in which he suggests: "It is not without assurance and confidence that we undertake at present the management of this special field of work (meaning open treatment of fractures); our methods of diagnosis are unfailing and certain, while the means of surgical treatment are more simple and the results more satisfactory than formerly." The Doctor fails to present a record of his cases, and it might be added, no surgeon who follows Lane's teaching has yet had a sufficient number of cases for the report to be of any special benefit, in comparison with the conservative plan of immobilization by external appliances and splints.

Mr. Lane's alleged claim for the open method of treatment of all fractures, therefore including simple fractures, we again take up for the purpose of showing how dogmatic his conclusions are based.

1. *Removal of pain due to movements of fragments.* We claim this can, except in very rare instances, be overcome by proper reduction and fixation with splints, without resort to the open method.

2. *Discomfort from extravasated blood, etc.* This can be overcome by proper bandaging, ice bag and a counter-irritant, resolvable course.

3. *Shortening the period of disability.* What if infection occurs? And then, too, it is often

necessary to make a secondary operation to remove the fixation device, and

4. *Restoration of the injured bone to its former condition.* This may be from a cosmetic effect, but not true as to restoration of function, and then consider what a great risk the surgeon runs in some simple fracture, like a meta-carpal bone.

Now for a word in regard to Prof. Championnière's massage. It, too, has but few advocates, yet, compelled to confess, we believe since its inauguration we have learned an all-important lesson, and that is, not to rely entirely on the use of splints, but begin massage and passive movements early. We cannot, however, agree with Sir William H. Bennett, in his proposed plan of massage alone for an intra-capsular fracture of the neck of the femur, when it will be remembered that Dr. Royal Whitman, of New York, not only obtains satisfactory results by putting up the limb in forcible abduction, but also obtains in many cases bony union.

Bockenheimer claims that, owing to the constantly increasing use of machinery, the greater devotion to sports, roller skating, automobiling, etc., fractures are becoming more common and therefore it is expected we should obtain better functional results than formerly. This gentleman insists on extension in all fractures where it is possible to institute the same, and early massage. His position on extension is so extreme that he states as his opinion "that ideal retention without the slightest impairment of function is possible only with extension." He also insists that a patient must refrain from bearing weight on the limb in case of fracture of the thigh for at least twelve weeks and for seven weeks in case of fracture below the knee.

In a recent trip to Panama we were surprised in going through our government hospitals with what uniformity the operative treatment was being adopted in the treatment of simple fractures, and this, too, in the face of some cases in which infection had occurred.

The truth of the whole matter is, the sub-

ject of fractures in the last ten years has received more attention than it had previous to this decade received in a hundred years. For this reason there is an unrest in opinions formed, pending the final settlement of the all-important question of treatment.

That the operative or open plan in certain cases of simple fractures is not only indicated, but the best treatment, there can be no doubt, for among its advocates are surgeons of wide experience, sound judgment and great skill; yet to attempt as a general or universal measure to make all simple fractures compound ones, by the open or operative plan, is an advance experience is not ready to demand. Nor are we willing to agree with so good and distinguished a surgeon as Dr. Robert F. Weir, that if we had our patella fractured, we would be content to have it treated like King Edward, but, on the other hand, would insist on an open operation, and thus obtain the best and firmest union possible.

From more than ordinary experience, we express the belief, that in simple fractures of the patella, olecranon and other bones in which reduction and retention are impossible, the weight of opinion is in favor of the open or operative plan. In the shaft of the humerus it is true we have more delayed or non-union than any other bone, yet the causes that produce the un-united fracture can nearly always be prevented, so that the prognosis of these fractures is good. From experience with various plans of immobilization, I must confess, the internal right angle splint, with or without the shoulder-cap, depending on whether the location of the fracture is high or low, is the ideal support and plan of treatment. Hamilton taught, that in fractures of the humerus, "the elbow soon became fixed, and that any movement of the fore-arm moves the seat of fracture and not the elbow." In the use of an internal angular splint, the forearm as well as the fracture, is immobilized.

As to fracture in the upper third of the shaft of the femur, it is universally acknowledged that treatment by external appliances is usually unsatisfactory and the results show great permanent shortening from angular union or overlapping. Treatment in the extended position fails to correct the displacement of the upper fragment, and the double inclined plane will not accomplish full control of this upper fragment. But following the advice of Agnew, in the use of this double inclined plane, extension in the axis of the partially flexed thigh, no doubt accomplishes the best non-operative results that can be obtained. Brown's modification of Hodggen's apparatus is quite satisfactory for fractures in the lower two-thirds of the bone. In all fractures of the upper-third of the femur, the displacement should be determined by the X-ray, which is not infallible, and to be of practical value, the skiagram must be taken by an expert and should be interpreted by a surgeon. When it is found that no form of apparatus will maintain reduction, it is advisable to incise, and fixate the ends of the fragments by Kangaroo-tendon or the use of the largest sized chromicized cat-gut. I don't like to use metallic fixative materials where it can possibly be avoided. Then in many simple fractures of the upper-third of the shaft of the femur, and even in very oblique fractures of the shaft of the tibia, in healthy patients of suitable age, the indications are for the open plan of treatment, but we can see no reason why it is always necessary to wire or otherwise fixate by open method, the inferior maxillary, clavicle or majority of bones.

Let us indulge the hope that the day is not far distant when authorities and surgeons will agree on the treatment of this all important subject, constituting, as it does, one-seventh of all injuries.

Watauga Club Building.

THE GREAT BLACK PLAGUE*

By REV. RUFUS W. WEAVER, Th.D.,

Nashville, Tenn.

Scene I. A church, fashionably dressed ushers seating a congregation richly attired (1) jewels gleam, the pulpit is banked with flowers, the opening notes of the bridal march sound, the attendants advance toward the altar, the officiating minister stands waiting, the groom attracts but little attention for all eyes are fastened upon the bride, who approaches leaning upon her father's arm. How beautiful she is! How proudly she advances toward the man who, in a moment, will be her husband. Study them both; the bride spotless in her purity and the groom no worse than the average young man. "The ideal which the wife and mother makes for herself," say Amiel, "the manner she understands duty and life, contain the fate of the community. Her faith becomes the star of principle that fashions the future of all belonging to her. Woman is the salvation or the destruction of the family. She carries its destinies in the folds of her mantle." As we gaze upon this sweet, pure-minded, Christian girl, we feel sure that the future is safe in her hands. Look now upon the young man—good parentage, excellent home influences, fine physique, manly bearing, from a moral viewpoint no worse than the other young men in our "best society." The minister has pronounced the benediction. The recessional sounds. The newly-made husband and wife go out.

Scene II. Two years have passed. A hospital. The minister kneels by the bed where a poor, wan sufferer waits a serious operation. The young wife, who, since her marriage, developed what is spoken of in a whisper as "a woman's complaint," must now undergo

the knife. The young husband is almost broken-hearted. His family and hers kneel with the minister, who prays fervently for the sufferer, invoking divine comfort upon the burdened husband. As they rise from their knees the minister impulsively throws his arms around the young man. All feel for him the deepest sympathy. Her family are depressed by the unfortunate situation and his family secretly deplore the fact that he married a woman so frail and so afflicted. The patient is carried to the operating room. At last the news comes: "Operation successful and we hope for a speedy recovery."

Scene III. Two years more. The city of the dead. The minister stands at the open grave and sadly gazes upon the lowered casket in which has been deposited the silent form of one who four years before had pledged her troth to the man of her choice. The successful operation had not led to recovery. Again she went under the knife. Months of suffering followed. Everyone sympathized with the poor, unfortunate husband. Many felt a sense of relief when the end came. Now every head is bowed. The minister utters the committal service: "Whereas it has pleased Almighty God in His all-wise providence to call from its clayey tenement, the spirit of our departed sister—" Blasphemy! A man had killed his wife—and the preacher has charged it upon God. I stand ready to prove the indictment. Let us to the facts.

Bluntly stated and without prudish reserve, the young man had gonorrhea before marriage, gave it to his innocent young wife, and after years of torture killed her.

*A paper prepared for the Evangelical Alliance of Nashville, Tenn., and read by request before the Nashville Academy of Medicine, March 15, 1910.

Listen to the facts: Ninety per cent of locomotor ataxia, over 75 per cent of ocular paralysis, 80 per cent of all cases of paresis, 34 per cent of all blindness, over 50 per cent of all operations performed upon women, 75 per cent of all suppurating pelvic inflammation and over 50 per cent of all cases of sterility are due to venereal diseases.

Dr. Joseph Tabor Johnson says: "The effects of gonorrhea on the female generative organs have been so destructive that no successful contradiction is feared when the belief is expressed that no disease in modern times has caused so much indirect mortality, mutilation and suffering, both mental and physical, as gonorrhea." Dr. Prince A. Morrow, one of the foremost siphilologists in this country, says that 70 per cent of the women who presented themselves for treatment at the New York hospital under his observation "were respectable married women who had been infected by their husband. Dr. Joseph Price, Philadelphia, says: "There are more and better reasons for locking up in jail a man with gonorrhea than there are to incarcerate a common murderer; in the one case there is but one victim and that victim is dead; in the other there may be a dozen more doomed possibly to suffering and sorrow during the remainder of their miserable lives." Dr. Prince A. Morrow says, "there is more venereal infection among virtuous wives than there is among prostitutes." He estimates that 8 per cent—one in every twelve—of the married women of the entire country are suffering from gonorrheal infection, while Noeggarath says, "80 per cent of the wives of New York City are infected." Dr. J. Tabor Johnson says, "The lowest estimate which we meet in recent literature is at least 75 per cent of the male inhabitants of our cities between the ages of 18 and 28 have had or now have the disease. In 1906 there was reported in Baltimore—one of the purest if not the purest of the six great American cities—5,047 contagious diseases, while in the same period there were treated in the hospitals and in private practice 9,450 cases of venereal disease,

and the great majority of cases were not reported, because the majority of these cases are not treated by physicians.

This is the Great Black Plague. We have heard much of the 100,000 who fill drunkards' graves each year, but nothing of the 450,000 boys in this country who take the fatal plunge into the moral sewer, losing what they can never regain, and who become the sources of disease, torture and death; bringing the women they marry into peril and sending thousands of innocent wives to the operating chair and the grave.

Gonorrhea is a misnomer—the name meaning a morbid discharge of semen. A better name would be infectious or specific urethritis—an urethral inflammation characterized by the presence of the gonococcus. This minute germ cell, which may be readily seen with a 500 power microscope, was not discovered until 1879 by Neisser. These germs manifest themselves in the male in from five to seven days after infection, and produce a white, milky mucous discharge, accompanied by inflammation. When the discharge ceases, the man supposes himself to be cured. Not so. Noeggarath believes that a man never fully recovers from his first gonorrhea, and claims that nine-tenths of all women married to men who have had gonorrhea eventually become sufferers from some form of pelvic inflammation. Not all authorities agree with Noeggarath, but they all unite in the opinion that gonorrhea is both active and contagious for an indefinite length of time, only ceasing in these respects when the organisms are killed out. These germs remain latent in the male and long after, often years after, become active when they come in contact with the fresh virgin soil of the wife. They remain harmless in the male often for years only to produce prolonged torture and death in some pure, innocent woman. No man who has ever had gonorrhea can ever marry without endangering the health of the woman whom he marries. In the conjugal act, the inert germs meet the soil they require, their vitality is restored, the seed is sown and the succeed-

ing generations soon bring the virus to its maximum of intensity. The woman then becomes a source of contagion and the husband is frequently struck down by the disease of which he was the cause. Little by little the genital organs of the woman are entirely involved, the general health is debilitated, all the functions are enervated and the poor woman drags about, easily fatigued and often in great pain. There is only one way of protecting the woman—chastity in man from childhood to marriage.

To-day much is being said about "race suicide." Naturally we have thought of the various methods used by those who are married to prevent conception or to produce abortion. If preventatives have slain their thousands, gonorrhea has slain its tens of thousands. The British Medical Journal, May, 1907, says from 10 to 25 per cent., possibly more, of all the cases of sterility in men are caused by gonorrhea, and that from 75 to 90 per cent. of all cases of sterility in women are caused by this disease. It is gonorrhea that is reducing the birth rate in France and the United States. There are thousands—tens of thousands—of wives who long for the clasp of little arms about their necks, who have grown bitter and rebellious, who feel that God does not answer prayer and have almost ceased to be religious, who have been cheated out of their marriage rights by the early sins of their husbands. It is the red light district of our cities that keeps God from answering the cries of these women with mother hearts.

When Dr. Joseph Tabor Johnson, Washington, D. C., says that there is abundant evidence to show that anywhere from 75 to 90 per cent. of abdominal operations upon women are required on account of the infection of the gonococcus, he is confirmed by one of the leading obstetricians of Nashville, who told me a short time ago that the figures were not too small for this city. One of the leading surgeons of Nashville, who is operating constantly upon men and women, says that 25 per cent. of all the operations of men

are traceable to gonorrhea, and that 50 per. of all the operations of women are traceable to a like cause. Most—indeed, nearly all—of these women operated upon come from respectable homes. They look with horror and contempt upon the fallen woman—the prostitute—and the prostitute has her revenge, for she transfers to her virtuous sister, via the unclean husband, the penalty of the prostitute's sin. Brethren, we have fought alcoholism and tuberculosis. I call you to another, more appalling, more horrible, more threatening to our social and moral order, more disastrous to the race than any other contagion on earth.

Have you ever wondered how a loving God could permit a child to be born blind? Mothers with blind babies have. Listen to the words of Helen Keller: "The cruellest link in the chain of consequences is the mother's innocent agency. She is made a passive, unconscious medium of instilling into the eyes of her new-born babe a virulent poison which extinguishes the sight." Helen Keller does not describe the toxin; we know. It is produced by gonorrhea. This diabolical disease, when it fails to make barren the woman, causing her to be so mutilated that death alone brings release from suffering, turns upon the new-born babe and destroys its sight.

Dr. Prince A. Morrow has well said, "Venereal infection stands as the prototype of evils made possible by the ignorance of the public. Venereal disease is not confined to the terrain of prostitution where it originates—it spreads beyond the purlieu of vice, and invades the habitations of virtue—even the sanctuary of marriage affords no safeguard against its soilure. It collects about the very sources of human existence; it pollutes the fountains of life; it befouls the sacred function of maternity; its defilement clings to the innocent infant ushered into the world. It is especially needful that the muck of venereal infection should be cleared away from marriage, the breeding place of humanity, so that the springs of heredity may be kept pure, and children no longer be deprived of their right-

ful heritage of vitality, health and vigor. The public should know that the introduction of venereal infection into marriage constitutes its chief social danger, and at the same time makes up the saddest chapter in the martyrdom of women."

Dr. Burr has recently said: "It is a disgraceful anomaly in State medicine in the United States that the most persistent of all contagions, the most prevalent of all, excepting measles, the most costly and dangerous of all in the aggregate, barring none, should have no official existence. The day must come when the suppression of the gonococcus shall rank in sanitary importance with the destruction of the mosquito; when the culture beds of the red light district shall be looked after as carefully as the drainage of stagnant and polluted waters."

The prostitute is the source of this terrible, blighting disease. From a city official, deeply interested in the preservation of public health and the protection of innocent womanhood, I have secured the following facts. Number of known public houses of infamy, 129. Of these 76 are filled with white women, 32 with colored women and 21 are public assignation houses. The total number of prostitutes in these houses are 561, to which should be added 24 kept women and 21 women keepers of the assignation houses, making a total of 606 women wholly dependent upon prostitution for a livelihood. To this must be added a large number of women and girls variously employed who supplement their wages by prostitution. There are many young girls in this city working for \$3.00 and \$4.00 a week who are paying board at \$20.00 a month. The number of girls between the ages of 14 and 18 who are street walkers is very large. Rooms in various parts of the city where women and girls meet men are numerous. The social evil in Nashville has greatly increased during the past few years. Beer-ette stands and the low order of many vaudeville shows are prolific causes of such increase. Venereal diseases are scattered more

by the "street walkers" than by the inmates of public houses whose keepers are financially interested in keeping the women sound.

There are more houses of prostitution in Nashville than there are churches. There are over 600 women who are wholly dependent upon prostitution, while the number of unchaste women cannot be known. Where would you place the estimate of unchaste men? What are the probabilities of our sisters and daughters who marry in Nashville escaping the tortures of this transmissible disease? Is Nashville a safe place to bring up a girl, assured that her married life will be happy?

We have laws on the statute books, but they are not enforced. We have able physicians and surgeons who are fighting the great black plague. We have a Mayor who is deeply interested in the welfare of the boys of our city—he has confessed it. But the situation is growing steadily worse.

It is not my purpose to attempt a solution of the oldest problem of human society. I offer the following for your consideration, believing that their adoption and enforcement will improve existing conditions:

1. Secure the passage of a state law forbidding the advertisement of remedies for the curing of gonorrhea and the prevention of child-bearing.

2. A similar law prohibiting the sale of nostrums and patent medicines for the curing of venereal diseases by druggists and the prohibition of the giving of "counter prescriptions" by drug clerks for gonorrhea and kindred diseases.

3. Require all physicians to keep a record of every venereal disease and to report to the Board of Health.

4. The regular examination of public prostitutes, sending the diseased immediately to the hospital for treatment, placarding the houses if they remain.

5. Begin a campaign of education, organizing a Society of Sanitary and Moral

Prophylaxis and distribute the tracts of the parent society.

6. Create a public sentiment which shall demand a new marriage law, requiring every man to submit to an examination establishing the absence of the gonococcus before a marriage license can be secured; make the

communication of gonorrhea on the part of the husband a ground for divorce.

These means are none too radical when the health and happiness of our virtuous women are involved. Moral leadership of a heroic kind is called for and the time for plain speech and fearless action has come.

EXAMINATION OF INFANT STOOLS WITH ESPECIAL REFERENCE TO SO-CALLED CASEIN MASSES*

By ROBERT GOLDSBOROUGH OWEN, A.M., M.D.,

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Iowa City, Ia.

With an infant mortality of from 20 to 25 per cent during the first year of life, 30 per cent of these cases being due to various forms of gastro-intestinal disturbances, and considering, moreover, the rapid course of such diseases, it behooves the practitioner to use every method at his disposal for the rapid diagnosis and prompt treatment of such cases.

In the examination of the infant stool we have an excellent method of determining various abnormal processes, providing we are thoroughly conversant with the conditions of, and the appearances of the normal discharges.

In the adult, examination of alvine discharges is much more complicated than in the infant, owing to the greater variety of food ingested, and it is absolutely essential for accurate work that the patient should first have the bowels cleaned out, and then be put upon a definite diet. This applies, of course, to the examination for digestive functions rather than that for various forms of parasites or their eggs, though we are all familiar with those cases of pseudo-parasites which promptly disappear by putting the patient upon some simple diet, the end products of which are known. The simple application of this principle would save the laboratory man many

unnecessary examinations for parasites owing to the appearance of the shreds, skins, etc., of various fruits and vegetables which appear in the stools.

In the case of the infant, we have our patient already on such a diet, whether the child be bottle fed or breast fed, and in the latter, by the way, digestive troubles are exceedingly rare as compared with the child fed on cow's milk, proprietary foods and their many modifications.

In the breast-fed child there are normally from one to five stools a day, yellow or orange in color, this color being due to unchanged bilirubin, of a soft consistency, acid reaction and without disagreeable odor. In the infant fed on cow's milk, the stools are usually bulkier, fewer in number and lighter in color, because the weak intestinal digestion of the child has a longer time to act and the bilirubin is more reduced. This longer time of digestion also accounts for the more marked odor of decomposition, and in the same way the alkaline reaction of such stools is brought about.

In some cases the mother may call the doctor's attention to the presence of certain slimy mucoid matter in the stools, although the child is apparently perfectly well, and such

*Read before the Johnson County Medical Society.

mucoid stools are frequently seen in children taking barley water. This mucoid material, however, should not be mistaken for true mucus, which, present in any quantity, means inflammation of the large intestine, usually subacute or chronic; where such mucus is intimately mixed with the stool and is bile stained, the process is more apt to be in the small intestine. True mucin is readily differentiated from the mucoid matter of barley stools by its precipitation with alcohol or acetic acid. Where the disease process is allowed to continue the mucus soon becomes blood tinged, the amount of blood becoming greater the more marked the process, and the longer the time it has continued.

The sudden passage of blood and mucus in a child who has shown no signs of intestinal trouble but has had a recent attack of acute pain, is highly suggestive of intussusception, a condition which Goldstone (1) claims is one of the most frequently overlooked affections of childhood, often being treated for gastro-enteritis with fatal results.

In infants fed on proprietary foods are often found brownish stools, acid in reaction, containing a considerable amount of undextrinized starch or other carbohydrate. These being readily detected by their blue color on the addition of a little iodine solution. Another stool somewhat similar is the foamy, bubbling stool, intensely acid in reaction, due to excessive sugar, such as is so often found in the dietary of children fed on condensed milk. In all these cases of acid stools excoriation of the buttocks is often seen due to the irritant effect of the stool.

The yellow color of the normal infant stool is due to bilirubin, and when still lighter to hydrobilirubin, but when the food is hurried through the intestines by purgatives or diarrhoea, we find the greenish color of biliverdin present, due to incomplete reduction either on account of lack of time for such reduction to occur, or as frequently happens, it is due to the action of the intensely acid intestinal fluids, although this idea is disputed by Pfeif-

fer (13), who claims that it is due to the action of alkalies.

I have purposely left to the last the discussion of the so-called casein masses, these being of variable size from mere flakes to large lumps and closely resembling the casein of cow's milk coagulated with rennet. Recent work, however, has shown that such masses are in reality composed of fat, soap, bacteria, altered intestinal epithelium and the secretion product of the intestines, which, it has been shown, may amount to as much as one liter a day in the case of a child one year old. This view regarding the origin of such masses was expounded in a modified form as early as 1878 by Widerhofer (2), but found little acceptance because such masses did not give a definite proteid reaction.

In 1906 Adler (3) showed that the nucleoproteids of the intestinal secretion, the nuclealbumins of the bile, hunger stools, and even the watery discharges of enteritis where no milk had been ingested for days all gave positive proteid tests, thus invalidating the results of proteid positive tests obtained from such masses by earlier writers, and later emphasized by Southworth and Schloss (4). In the same way the contention of Talbot (5) that such masses contain fifty per cent of proteid does not give us any proof as to the origin of such proteid from casein; and, moreover, such masses are often seen in stools from infants fed on whey which contains neither fat nor casein. In such cases their probable origin from an intestinal secretion is clear. In the same way the amount of nitrogen in the stool bears little relation to the amount ingested, and in fact breast-fed children may show as much nitrogen excretion per diem as bottle-fed, though in the case of the former the amount of nitrogen taken in with the food is much less. Orgler (7) has made numerous quantitative tests of nitrogen in infant stools with the following average result: 100 grams of dry stool from a breast-fed child gave 4.02 grams of nitrogen; one hundred grams from a bottle-fed child gave 4.21 grams.

Meyer and Leopold (8) reporting work from Finkelstein's clinic in Berlin, claim that such masses rarely represent undigested casein; a contention which is proved by the work outlined above, but that such masses are due to the elements mentioned previously, whose excessive production is owing to the irritation of the intestines by acids of decomposition which are present when there is excess of sugar or fat in the dietary. In a later paper Meyer and Leopold (9) reply to Talbot's contention, review the literature and give a summary of the clinical evidence of cases of so-called proteid indigestion, which, as above said, they claim to be a misnomer, and assert that infants can take a very high amount of proteid without untoward effect.

Zahorsky (10, 11) gives the following differential points between true casein curds and those due to fats, fatty acids, and intestinal secretion:

1. Soap curds are granular and more easily crushed.
2. Soap curds are but slightly affected by formalin, while casein becomes tough and leathery.
3. Soap is usually readily dissolved in ten per cent hydro chloric acid in absolute alcohol, casein but slightly affected.
4. Tincture of iodine applied for ten minutes stains both; but the soap loses brown color readily on washing with alcohol, while the

casein is but little changed. If one cares to apply more accurate tests the solution of the masses of fat, fatty acids, etc., in reagents such as alcohol and ether, and subsequent crystallization, and microscopic examination may be resorted to. A description of such methods has recently been published by T. A. Cope (12).

SUMMARY.

We thus see that inspection of the stools, at times seconded by the application of a few simple chemical tests, may give us most valuable information concerning the diagnosis and treatment of our little patients, especially in those cases which hitherto have been attributed to proteid indigestion.

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SELECTED ARTICLES.

ON THE ESTABLISHMENT OF A NATIONAL BUREAU OF HEALTH*

By HON. ROBT. L. OWEN.

Mr. President, the people of the United States suffer a loss of over 600,000 lives per annum. This terrible loss might be prevented by reasonable safeguards under the co-operation of the federal and state authorities, each within strict constitutional limits.

These deaths are caused by polluted water, impure and adulterated food and drugs, epidemics, various preventable diseases—tuberculosis, typhoid and malarial fevers, and so forth—unclean cities, and bad sanitation.

Measuring the money value of an American citizen at \$1,700, this preventable loss by death is one thousand millions of dollars annually, equal to the gross income of the United States Government.

There are 3,000,000 people in the United States on the sick list from preventable causes, of whom 1,000,000 are in the working period of life; about three-quarters of a million actual workers losing on an average of \$700 per annum, an approximate loss from illness of five hundred millions, and adding a reasonable allowance for medicine, medical attendance, special food and care, a like sum of five hundred millions, these losses would make another thousand million dollars of preventable loss to the people of the United States.

AUTHORITY FOR FACTS STATED.

Do you imagine that these figures are exaggerated or fanciful, Mr. President? They are confirmed to us by the report of the Committee of One Hundred on National Health in its Report on National Vitality. (Bulletin No. 30, p. 12.) This bulletin was prepared by Prof. Irving Fisher, professor of political economy of Yale University, with the assistance of the most learned men in the whole world, including Prof. Lafayette B. Mendel, of Sheffield Scientific School of Yale

University; Prof. M. V. O'Shea, University of Wisconsin; Dr. Charles W. Stiles, a chief of the hygienic laboratory of the United States Public Health and Marine-Hospital Service; Robert M. O'Reilly, former Surgeon-General of the United States Army; Prof. C. I. Henderson, University of Chicago; and the officials of the various public health societies and of the American Medical Association; Dr. George M. Kober, dean of the Georgetown Medical College; Dr. Norman E. Ditman, Columbia University; Dr. J. H. Kellogg, of Battle Creek; Hiram J. Messenger, actuary of the Travelers' Insurance Company, and so forth.

Mr. President, our pension roll of over \$150,000,000 per annum is three-fourths of it due to illness and death from diseases that were preventable. Under a wise administration in the past the United States would today be saving an annual charge of about \$125,000,000 on the pension list, and would have saved under this heading over \$2,000,000,000 and much human misery and pain.

Will you fail to listen when on my honor as a Senator I call your attention to the vast importance of this matter and the high standing of those who vouch for the accuracy and reliability of this statement? Will you, as the representatives of the people of the United States, fail to investigate and to act in a matter of such consequence?

ORIGIN OF BILL 6049.

There are the facts; there are the authorities. Mr. President, nine years ago I had the importance of this subject called to my attention by an article read before the Cincinnati Academy of Medicine, October 7, 1901, on "Preventable disease in the Army of the United States—cause, effect, and remedy," by Maj. William O. Owen, a surgeon in the

Delivered in the U. S. Senate, March 24, 1910.

United States Army, printed in the *Journal of the American Medical Association* October 26, 1901, where he pointed out over 19,000 cases of typhoid fever in four camps—Chickamauga, Alger, Meade, and Jacksonville—with 1,460 deaths of the finest young men of America, nearly all of which was a preventable loss. The typhoid cases, with resultant deaths, were due to ignoring the laws of sanitation. (Exhibit 10.) I drew this bill (S. 6049) in the hope of co-operating with the administration in making effective the most important of all forms of conservation—the conservation of human life—and in the hope of making effective the expressed desires of the numerous associations and societies of the United States who stand for a department of public health.

No man can read the Report on National Vitality—Its Wastes and Conservation, of the Committee of One Hundred without being impressed with certain great facts:

1. The thoroughness and scientific care with which it made this report.

2. The stupendous annual loss of life which could be prevented; the immense economic commercial loss and human misery and sorrow due to preventable illness, inefficiency, degeneration, and death.

3. The wisdom of the means proposed by the Committee of One Hundred for the prevention of this annual loss and for the conservation of the national life and health.

SUPPORT OF THE PLAN PROPOSED.

Mr. President, there is not in the world a more distinguished body of scientists and philanthropists than the Committee of One Hundred, appointed by the American Association for the Advancement of Science.

Irving Fisher, professor of political economy of Yale University is its president. The vice presidents are: Rev. Lyman Abbott, editor *Outlook*, New York City; Miss Jane Addams, of Hull House, Chicago; Felix Adler, lecturer, of New York City; James Burrill Angell, diplomat, New York City; Hon. Joseph H. Choate, ex-ambassador to England, New York City; Charles William

Eliot, president of Harvard University, Cambridge, Mass.; Right Rev. Archbishop Ireland, St. Paul, Minn.; Hon. Ben B. Linsay, Denver, Colo.; John Mitchell, New York City; Dr. William H. Welch, professor pathology, Johns Hopkins University, Baltimore, Md.; Secretary Edward T. Devine of the Survey; and the list of 100 contains other names as notable, including Miss Mabel T. Boardman, president of the Red Cross; Andrew Carnegie; Thomas A. Edison; Mrs. John B. Henderson, of Washington; Prof. David Starr Jordan, president Stanford University; Dr. Charles A. L. Reed, chairman of the legislative committee of the American Medical Association, of Cincinnati, Ohio; Robert S. Woodward, president Carnegie Institution, Washington, D. C.; and a host of others no less distinguished for learning, patriotism and philanthropy.

INCREASING LENGTH OF LIFE.

The modern duration of life is widely variant, according to the organized protection of the health of the people by government.

In India the average length of life is twenty-three years, due, not to climatic conditions, but to ignorance, prejudices, and religious superstitions. They will not kill a snake in India, and thousands of inhabitants die annually from the poison of snake bites. In America we die in like manner from typhoid and tuberculosis, because we neglect to suppress the causes of these diseases.

The length of life in India is not increasing because of their lack of progress; but in Geneva, Switzerland, where the country is supposed to be very healthy, the length of life in the sixteenth century was only 21.2; in the seventeenth century, 25.7; in the eighteenth century, 33.6; from 1801 to 1883, 39.7; and it is steadily improving.

THE PROLONGATION OF LIFE.

Scientific hygiene and increased knowledge of the laws relating to health have had a very striking effect upon the prolongation of human life throughout the world.

At present in Massachusetts life is lengthening at the rate of fourteen years per century; in Europe

Report On National Vitality—Possible Prolongation of Life

Cause of death.	(2) A. Median age of deaths from causes named.	(3) E. Expecta- tion of life at median age.	(4)* C. Deaths due to causes named as percentage of all deaths.	(5) D. Ratio of pre- ventability (responsible for) of "preven- table" deaths from cause named to all causes named.	(6) E—OD Ratio of "pre- ventable" deaths from cause named to all deaths from all causes.	(7) F—BE Years added to average lifetime if deaths prevented in the ratio of preventability of column 5.
	Years.	Years.	Per cent.	Per cent.	Per cent.	Years.
1. Premature birth	50	31	2	40	9.8	0.4
2. Congenital malformation of heart (cyanosis)	50	30	3.5	0	...	...
3. Congenital malformation other than of heart	50	30	2.3	0	...	...
4. Congenital debility	50	30	2.3	0	...	...
5. Hydrocephalus	50	30	1	40	3.2	...
6. Venereal diseases	50	30	7.2	70	...	...
7. Marjha and enteritis	50	30	7.2	70	...	...
8. Acute bronchitis	50	30	1.1	40	4.64	1.1
9. Acute pneumonia	50	30	1.1	40	3.2	2.32
10. Broncho-pneumonia	50	30	2.4	30	3.2	1.6
11. Whooping cough	50	30	2.4	30	3.2	1.7
12. Whooping	50	30	1.6	40	1.26	...
13. Tetanus	54	32	1.6	75	...	...
14. Diseases of larynx other than laryngitis	54	32	1.6	75	...	...
15. Laryngitis	54	32	1.6	75	...	...
16. Diphtheria	54	32	1.6	75	...	...
17. Scarlet fever	54	32	1.6	75	...	...
18. Diseases of lymphatics	54	32	1.6	75	...	...
19. Tonsillitis	54	32	1.6	75	...	...
20. Tetanus	54	32	1.6	75	...	...
21. Tuberculosis other than lungs	54	32	1.6	75	...	...
22. Abscess	54	32	1.6	75	...	...
23. Typhoid fever	54	32	1.6	75	...	...
24. Typhoid	54	32	1.6	75	...	...
25. Epilepsy	54	32	1.6	75	...	...
26. Puerperal septicemia	54	32	1.6	75	...	...
27. Other causes incident to childbirth	54	32	1.6	75	...	...
28. Peritonitis	54	32	1.6	75	...	...
29. Peritonitis	54	32	1.6	75	...	...
30. Smallpox	54	32	1.6	75	...	...
31. Tuberculosis of lungs	54	32	1.6	75	...	...
32. Malaria	54	32	1.6	75	...	...
33. Malarial fever	54	32	1.6	75	...	...
34. Septicemia	54	32	1.6	75	...	...
35. Epilepsy	54	32	1.6	75	...	...
36. General ill defined, and unknown causes (in- cluding heart failure, dropsy, and "convulsions")	54	32	1.6	75	...	...
37. Erysipelas	54	32	1.6	75	...	...
38. Pneumonia (lobar and unqualified)	54	32	1.6	75	...	...
39. Acute nephritis	54	32	1.6	75	...	...
40. Chronic nephritis	54	32	1.6	75	...	...
41. Acute atrophy of liver	54	32	1.6	75	...	...
42. Obstruction of intestines	54	32	1.6	75	...	...
43. Alcoholism	54	32	1.6	75	...	...

44. Hemorrhage of lungs	47	21	1	57	34	09
45. Diseases of thyroid body	46	24	.02	80	.08	.02
46. Ovarian tumor	16	25	.07	10	.002	.0005
47. Uterine tumor	16	25	..	..	..	..
48. Rheumatism	47	33	.1	40	.06	.02
49. Diseases of joints	17	33	.32	10	.04	.01
50. Arterial palpitations	18	33	.65	..	..	..
51. Chronic poisonings	18	33	.65	26	.2	.65
52. Congestion of lungs	19	22	4	70	.067	.067
53. Liver of stomach	49	22	..	30	.2	.04
54. Peritonitis	19	22	.75	20	.02	.02
55. Typhoid fever	19	22	..	20	.02	.02
56. Cancer of female genital organs	22	20	.1	10	.015	.002
57. Dysentery	32	20	.6	10	.01	..
58. Gastritis	32	20	.5	0	..	..
59. Gastritis	32	19	65	80	.4	.08
60. Cholera nostras	33	19	.09	50	.32	.06
61. Cholera nostras	33	19	.09	50	.32	.06
62. General paralysis of insane	33	18	.3	60	.54	.1
63. Hydatid tumors of liver	56	002	..	75	.22	.04
64. Endocarditis	56	17	..	75	.002	.0003
65. Locomotor ataxia	56	17	.17	25	.2	.03
66. Diseases of veins	56	17	.4	35	.06	.01
67. Diseases of breast	56	16	..	40	.02	.003
68. Diabetes	58	16	.5	0	..	..
69. Biliary calculi	58	16	..	10	.08	.01
70. Hernia	59	16	.17	40	.01	.01
71. Cancer, not specified	59	16	.27	70	.19	.03
72. Cancer, not specified	59	16	.08	..	..	..
73. Bright's disease	59	16	5.6	0	..	..
74. Embolism and thrombosis	60	15	..	40	.36	.36
75. Cancer of stomach and liver	60	15	.26	..	..	..
76. Cancer of stomach and liver	61	15	..	0	..	..
77. Calculi of urinary tract	61	14	1.6	0	..	..
78. Calculi of urinary tract	62	13	.02	..	..	..
79. Heart disease	63	13	8.1	0	.003	.0004
80. Influenza	64	13	..	25	.202	.26
81. Asthma and emphysema	64	13	.5	25	.35	.65
82. Angina pectoris	65	12	.23	30	.07	.009
83. Angina pectoris	65	12	.4	25	.06	.01
84. Cancer of skin	70	10	.3	..	1.54	.01
85. Chronic bronchitis	71	9	.5	0	..	..
86. Paralysis	71	9	1	30	.24	.02
87. Softening of brain	71	9	..	50	.3	.04
88. Softening of brain	71	9	.28	0	..	..
89. Diseases of bladder	73	8	.2	0	.06	.007
90. Diseases of bladder	73	8	.25	10	.09	.007
91. Gangrene	74	8	..	4	.1	.01
92. Old age	74	5	2	60	.15	..
All causes	38	..	100	0	..	..
Residence	..	..	..	42.3	***42.3	14.06
Diseases of infancy (having median age 1)	..	..	15.5	..	..	..
Diseases of childhood (having median age 2 to 8)	..	..	4.2	47	8.8	14
Diseases of middle age (having median age 23 to 49)	..	..	43	67	3.8	1.51
Diseases of late life (having median age 52 to 83)	..	..	34.3	49	21.2	6.52
All causes	..	..	100	28	9.5	1.33
Sex	..	..	..	42.3	***42.3	14.06
Male	..	..	..	..	..	..
Female	..	..	..	..	..	..

***Expectation in this column.

***Expectation for females.

***Although this is the ratio of general preventability of deaths under existing conditions, the death rate, i. e., deaths in relation to population, will not in this ratio but by only about 25 per cent. The reason for this paradox is that deaths prevented lead to a larger population.

about seventeen years; in Prussia, the land of medical discovery and its application, twenty-seven years; in India, where medical progress is practically unknown, the life span is short, twenty-three, and remains stationary.

It is demonstrated beyond reasonable doubt by the report of the Committee of One Hundred that the average human life in the United States may be, within a generation, prolonged over fourteen years. I submit the table as to the method of this calculation:

This detailed estimate of the prolongation of human life fourteen years is based upon a vast amount of data and is a conclusion justified by the knowledge of the most learned men in the world.

I remind you again of what I pointed out a year ago, that in New Zealand the deaths per thousand per annum is 9 and a fraction and in the Australasian states 10 and a fraction, while in the United States it is 16.5, a loss of 7 to the thousand in the United States in excess of the New Zealand rate—that is, in 90,000,000 people it would exceed 600,000 deaths that could be saved annually in our Republic.

YELLOW FEVER.

Mr. President, before the American intervention in Cuba the death rate from yellow fever alone in Habana to the hundred thousand population in 1870 was 300; in 1880, 324; in 1896, 639; in 1897, 428; and after the American occupation it fell: 1900, 124; in 1901, 6; in 1902, zero; in 1903, zero; in 1904, zero.

What a glorious record! What a splendid tribute to the learning, industry and self-sacrifice of the devoted medical men who accomplished this result, most of whom are now dead. James Carrol and Lazier died from experimental yellow fever, sacrificing their own lives deliberately in the interest of their fellow-man. All honor to their names and to the names of Walter Reed and the others, who, brave, gallant soldiers of peace, exposed their lives for the benefit of their fellows. Monuments of stone and of bronze should be erected to these noble patriots of peace, more noble

and self-sacrificing in their work than patriots of war. What does the commerce of the world owe to these men who vanquished yellow fever? There could have been no Panama Canal except for this development of science.

HOOKWORM.

I am informed by a high authority that over 90 per cent of the children of one of the Southern States are afflicted with the hookworm, a preventable disease, curable at a cost of less than 50 cents apiece with two doses of thymol and a little careful treatment, yet the disease is denied, prejudices and lack of learning stand in the way of the speedy restoration of thousands, and the voice of the men who know the habits, life, history, and remedy for hookworm carries with it little power or authority to heal the unlearned patients. Only the power of the State itself, with its dignity and with its authority; only the power of the General Government, with its prestige and with its high standing, is competent to impress upon the minds of the unlearned body of the people those principles of hygiene, preventive medicine, and sanitary law which are essential to the preservation of the life of the American people.

PEOPLE UNINFORMED EXPOSE THEMSELVES.

With the record in Habana of the control of yellow fever there are thousands of unlearned people who will ignorantly ridicule the means of the mosquito as an agency for transmitting this disease; that will deny the transmission of malaria by the mosquito.

And there are thousands who will ignorantly deny that bubonic plague is transmitted by the flea from the rat and the squirrel to the human being. The power of the Government alone acting through its strongest arm is necessary for the prevention of a wholesale introduction into the United States of bubonic plague.

The bubonic plague is now among the ground squirrels and rats on the Pacific coast at various scattered points over a thousand miles apart, due to the thoughtless ignorance, interest and prejudice of the commercial in-

terests of San Francisco that suppressed the faithful and intelligent work attempted to be discharged by the officers of the Marine-Hospital Service, which I may more fully set up hereafter.

The bill which I have introduced is in accordance with the earnest repeated desires of the American Medical Association, probably the largest and most honorable association of physicians and surgeons in the whole world as far as the principle of the bill is concerned. I have an earnest letter from Dr. Charles A. L. Reed, chairman of the legislative committee of the American Medical Association, which I herewith insert:

CINCINNATI, March 10, 1910.

HON. ROBERT L. OWEN,

United States Senate, Washington, D. C.

DEAR SIR: In compliance with your request for suggestion to be taken up in connection with the hearing on the bill recently introduced by you to create a department with a secretary of health, I beg to reply in my capacity as chairman of the legislative committee of the American Medical Association. In that capacity I have the honor at the same time to request, first, that you avail yourself of an early opportunity, and in your own way, to lay before the Senate the facts which I shall present; and, second, that you arrange at an early date for a hearing on your bill, the vital principle of which is so distinctly in consonance with the interests of the people, as represented by and through the medical profession.

This is shown by the fact that the American Medical Association, through its legislative conference, attended by delegates from 36 States and from the army, navy, and the Public Health and Marine-Hospital Service, held at Chicago, March 2, 1910, urged by resolution, as the association has repeatedly urged for nineteen years, "that a bill be passed recognizing the health interests of the country in the title of a department of the National Government, and that within that department there be organized all national health agencies."

The physicians of the country, who, as professional students of the question and as the natural advisors of the people on health questions, and who, consequently, have first knowledge of the subject, have long maintained their present attitude for the following specific reasons:

First. The time has arrived when, under the law of precedent, the health interests of the country ought to pass from their present bureau stage of development to that of a department. This course

of evolution was exemplified, first, I believe, in the development of the Department of the Interior, then that of Agriculture, and, finally, that of Commerce and Labor. In each of these instances the antecedent bureaus had existed for periods varying from a few years to a decade or two. The health interests of the country, more fundamental than all, have been left in the form of, successively, a "service," then of a "bureau," for more than a century.

Second. The creation of a department of health is furthermore demanded; first, because sanitary science has demonstrated its ability to conserve the efficiency and prolong the life of the people; and, second, because nothing less than the establishment of a department can have that maximum of moral force and educational influence, that maximum of prestige and effectiveness combined with businesslike economy of administration that will enable it to deal with the disgraceful, not to say monstrous, conditions now prevailing in this country.

Third. That a department of health, with the fullness of power and influence that can inhere only in a department and nothing less than a department, is demanded by the conditions to which I have alluded is conclusively established by the fact that, first, about 600,000 people die in this country every year from preventable causes; second, that something more than 3,000,000 more are made ill and idle for variable periods every year from the same causes; and, third, that the annual economic loss from this source alone amounts to more than a billion and a half dollars every year.

Fourth. That nothing less than a department of health, acting in cooperation with the States and in full recognition of their rights and powers, is practicable for the assembling and coordinating of the existing health agencies of the Government and for their effective, economic, and businesslike administration.

Fifth. That nothing less than the creation of a department of health can comprise a fulfillment of the pledge to the people contained in the platform of every political party that appealed to the popular suffrage in the last national campaign.

In view of the foregoing facts and considerations, I have the honor to request that at the hearing on your bill care be taken to give special consideration to the suggestions which I shall enumerate.

Many, if not all of them, have been covered in general terms and some of them in specific terms, in your bill. It has seemed, however, that by presenting them somewhat in detail in the form of sections to a possible bill, I could facilitate their consideration in consecutive order as follows:

Section 1 ought to provide, as your bill does provide, for the establishment of a department of health under the supervision of the secretary of

health, who shall be appointed by the President by and with the consent of the Senate, at a salary of \$12,000 per annum and who shall be a member of the Cabinet of the President and who shall discharge the duties prescribed in the act.

Section 2 might with propriety provide for the constituent bureaus of the Department of Health as follows:

(a) The Bureau of Hygiene and Preventive Medicine, to which (a) shall be transferred the Laboratory of Hygiene, now located in the Bureau of Public Health and Marine-Hospital Service in the Department of the Treasury, together with all duties, functions, powers, rights, and prerogatives now vested by law in such Laboratory of Hygiene, and it shall be the further duty of the Bureau of Hygiene and Preventive Medicine (b) to cooperate with the respective States, Territories, and dependencies in accumulating statistics and other information as to causes and prevalence of disease; (c) to conduct continuous investigation into all sources of danger to human health and life; (d) to formulate rules and regulations for carrying out these provisions, and (e) to publish the records and results of its labors, all under the direction and by the approval of the Secretary of Health.

(b) The Bureau of Foods and Drugs, to which (a) shall be transferred all duties, functions, powers, rights, and prerogatives now devolving by the Food and Drugs Act of 1907 on the Bureau of Chemistry of the Department of Agriculture; and the Bureau of Foods and Drugs shall also (b) supervise the cleanliness and other hygienic and sanitary features of the buildings and products of manufactories, cold-storage plants, and other establishments engaged in the commercial preparation or in the storage of any food product or products whatsoever destined for interstate commerce; (c) establish standards of purity of foods; (d) conduct investigations to determine the best method of preparing foods with reference to the full development of their nutritive value; (e) determine the food value of articles not now generally recognized as foods; (f) establish standards of purity for drugs; (g) make a systematic and exhaustive study of the medicinal flora of the United States and its Territories and dependencies; (h) investigate and, where practicable, promote the naturalization and commercial cultivation within the United States, its Territories and dependencies, of medicinal flora indigenous to other countries; (i) publish reports of its investigations, activities, and conclusions; and (j) formulate and enforce necessary rules and regulations all under the direction of the Secretary of Health.

(c) The bureau of marine hospitals, to which shall be transferred the Marine-Hospital Service of

the Bureau of Public Health and Marine-Hospital Service of the Department of the Treasury, together with its present personnel and all duties, functions, powers, rights, and prerogatives now vested by law in such Marine-Hospital Service, all to be administered under the direction of the secretary of health.

(d) The bureau of quarantine, to which shall be transferred the Quarantine Service now located in the Bureau of Public Health and Marine-Hospital Service of the Department of the Treasury, together with its present personnel and all duties, functions, powers, rights, and prerogatives now vested by law under such Quarantine Service, all to be administered under the direction of the secretary of health.

(e) The bureau of institutions and reservations, to which shall be transferred all hospitals, asylums, "homes," and infirmaries located in any other department of the government except the Department of War and the Department of the Navy. And there shall likewise be transferred to this bureau the Hot Springs Reservation and all other reservations now or hereafter established by the Federal Government for the conservation of health.

(f) The bureau of vital statistics, to which shall be transferred the Bureau of Vital Statistics now located in the Department of Commerce and Labor, together with its present personnel and all duties, functions, powers, rights, and prerogatives now vested by law in such Bureau of Vital Statistics.

(g) The bureau of publication and publicity, which shall (a) publish the reports of the secretary of health and all reports, bulletins, and documents of all bureaus of the department of health when approved for the purpose by the secretary of health, and (b) devise and carry out the most effective means by which information originating in the department of health or any of its bureaus may be most widely and effectively disseminated for the information and guidance of the people.

Section 3 might with equal propriety provide that (a) there shall be a medical service of the Department of Health (b) designated by the initials U. S. H. S., meaning "United States Health Service," (c) which service shall consist of (1) a Regular Medical Corps, which shall consist of the United States Marine-Hospital Corps with its present personnel and without other modification in the law governing the same, or in the regulations enacted in pursuance of such law than may be necessary to comply with the provisions of this act. (2) A special Medical Corps, which shall consist of all physicians, surgeons, and medical officers now employed in any capacity in any department of the Government, excepting in the army and navy who, subject to the direction of the secretary of health, but without having their status otherwise disturbed, shall continue in their present capacity until the

expiration of their present tenure, but thereafter all such positions shall be filled by detail from the regular Medical Corps which shall be selected in the first instance in accordance with regulations not less exacting than those which now govern entrance into the Marine-Hospital Corps. (d) The secretary of health shall, consistently with the provisions of this act, (1) define the grades of health service with due regard to the period of service and efficiency record of its members; (2) prescribe uniforms and insignia for each grade; (3) formulate rules and regulations for the government of the corps, and at his discretion (4) detail any member of the corps for duty in any bureau of the Department of Health, or (5) for duty in any other department on request of the secretary of such department, or (6) for duty in any State, Territory, or dependency, or in the Panama Canal Zone when requested so to do by the proper authority of such State, Territory, dependency, or the Panama Canal Zone whenever the resources of the service will permit such detail.

Section 4 might further define the duty of the secretary of health by stating that in addition to the duties elsewhere prescribed in the act (a) he may, in his discretion, transfer specific duties from one bureau to the other whenever required in the interests of both economy and efficiency; (b) exercise all the functions heretofore exercised, respectively, by the Secretary of the Treasury, the Secretary of the Interior, the Secretary of Agriculture, and the Secretary of Commerce and Labor in connection with any bureau, division, or service transferred by the act to the Department of Health; (c) exercise all duties heretofore exercised by the Secretary of Agriculture in the enforcement of the pure food and drugs act; (d) discharge such other duties as may be prescribed from time to time by the President and, finally, (e) prepare and submit reports relative to his department embracing suggestions for the improvement of its service, including recommendations for change in personnel, duties and salaries.

Section 5 might provide (a) that the President be authorized and directed within one year from the passage of the act to appoint an advisory board of health to consist of six members, two to be appointed for one year, two for two years, and two for three years each, who shall serve without pay, except their traveling expenses, for not more than six meetings annually, and whose functions shall be to confer with and advise the secretary of health relative to all questions of policy pertaining to human health and upon other questions at the request of the secretary of health; (b) the present consultative arrangement between the present Bureau of Health and representatives of the state boards of health might with propriety be continued between

the Department of Health, its Secretary, advisory health boards, chiefs of bureaus, and the representatives of the state boards of health.

Section 6 and succeeding sections might provide in the usual way for the transfer of officers, clerks, employees, property, fixtures, etc.

In asking that you take the foregoing points under special consideration; that the hearing be arranged for the earliest practicable date, and that legislation be reached, if possible, at the present session of Congress, may I ask that you urge upon your colleagues the importance to the people of giving due weight to the conditions to which I have referred?

I have said that over 600,000 of our people die every year from preventable causes. Suppose that our entire army and navy were swept off the earth not once but three times in a year. Would the Congress do anything about it? There are nearly 5,000,000 needlessly ill every year. Suppose that every man, woman and child in all New York, with Boston and Washington added, were similarly stricken. Would the Congress inaugurate an inquiry? Our losses from these causes amount to a billion and a half dollars every year. Suppose that every dollar appropriated annually for the expense of the government and half as much more were actually burned up and the ashes blown into the sea. Would the Congress take action in the premises?

Our health agencies are scattered, uncorrelated, and unorganized. Suppose that our monetary system were looked after by a dozen or more bureaus in almost as many departments, and that it were responsible for a billion and a half dollars loss every year. Would the Congress be disposed to think that there was possible relationship between the lack of organization and the deficit?

In reiterating the request for an early and full hearing on this question, I beg to emphasize the fact that I do so in behalf of the American Medical Association and in behalf of the interests of the people of the United States, as represented by and through the medical profession. And in this behalf and in view of the fact, deducible from our vital statistics, that in this country alone the people are dying from preventable causes at the rate of more than one every minute and that they are falling ill from the same causes at the rate of more than five every minute, may I not venture to suggest that the subject is one of sufficient importance to be entitled to precedence over some other questions that may possibly be engaging the attention of the committee?

Awaiting your early reply, I have the honor to be,

Very sincerely,

CHARLES A. L. REED,
*Chairman of the Legislative Committee,
American Medical Association.*

P. S.—I beg leave to advise you that I am sending a letter to the same purport, and largely in the same language as this, to Hon. James R. Mann, of the House, who has requested suggestions to be considered in committee in connection with the recommendations relative to the public health clause contained in the President's message.

Mr. President, this bill (S. 6049) co-ordinates and brings into one working body the various health agencies of the Government.

It proposes no new officers except the secretary and his assistant, who should be a permanent officer, acting as a director-general. Perhaps such assistant should have this title.

It calls for no new appropriations except the salary of the secretaries.

It will provide a number of economies by preventing duplication, and make more efficient the money expended and the officials employed by the present health agencies of the Government.

The co-ordination of these agencies has been approved by President Taft, and the vigorous co-operation of such agencies with the state authorities in stamping out disease has been urged by President Roosevelt.

I quote President Taft and what he said in regard to the work of the Committee of One Hundred in their desire to promote the national health:

How nearly this movement will come in accomplishing the complete purpose of its promoters, only the national legislator can tell. Certainly the economy of the union of all health agencies in the National Government in one bureau or department is wise.

President Roosevelt said:

I also hope that there will be legislation increasing the power of the National Government to deal with certain matters concerning the health of our people everywhere. The federal authorities, for instance, should join with all the state authorities in warring against the dreadful scourge of tuberculosis. I hope to see the National Government stand abreast of the foremost state governments.

I introduced this bill providing for a department and not for a bureau. The reason for a department instead of a bureau is perfectly obvious and perfectly unanswerable.

I reiterate and indorse the five substantial reasons given by Charles A. L. Reed, chair-

man of the legislative committee of the American Medical Association, and invite special attention to the cogency of the reasons given.

It is generally agreed that these bureaus should all be brought together as one working body. To bring established bureaus under a new "bureau of public health" would be to lower the dignity of the present bureaus by making them the subordinate bureaus of a new bureau, which would be offensive to every bureau so subordinated.

To bring these bureaus under a department would not lower the prestige of a bureau thus co-ordinated with other bureaus under the department, and would, I believe, generally meet the approval of the government officers employed in the various bureaus so co-ordinated, giving them a new dignity by being a distinct branch of a department of public health, through which they could enlarge their efficiency and find better expression and publicity of work done for the public health.

We have had bureaus for one hundred years. They are scattered in eight departments. They have been disconnected and without co-ordination. They have ever been jealous of each other, the one nullifying and hampering the work of another. They have been without a responsible head because of this subdivision and because the chief of the most important of these bureaus, the Surgeon-General of the Public Health and Marine-Hospital Service, cannot express an opinion or give information until he has consulted the Secretary of the Treasury.

The Secretary of the Treasury was not selected as a Cabinet officer because of his knowledge of the public health, but because he was an expert on finance. At present our Cabinet expert on finance directs government activities in controlling bubonic plague, and the board of trade and the commercialized physicians of San Francisco would be more important in his eyes in all human probability than the chief of one of his subordinate bureaus; at all events this was true as to a previous Secretary.

BUBONIC PLAGUE ON THE PACIFIC COAST.

When the bubonic plague broke out in San Francisco in 1900—one of our importations from the Orient, known in former times as the black death or the plague—the city board of health of San Francisco quarantined the Chinese district. (It is the most deadly epidemic disease known to men. In the outbreak in Bombay 220,000 cases gave 164,000 deaths. This disease, as the black death, killed 68,596 people in London in 1665, nearly half of those who remained in the city.) The United States circuit judge, on June 15, 1900, influenced by the commercial spirit of San Francisco, declared the city quarantine illegal gratuitously observing in his opinion:

If it were within the province of this court to decide the point, *I should hold that there is not and never has been a case of plague in this city.*

This high authority on bubonic plague would also have decided, "if within the province of his court, that there never would be a case in San Francisco." His judgment in the one case would be as persuasive as in the other.

Bubonic plague was then in the city. It is now scattered over the Pacific coast at points a thousand miles apart and is requiring enormous sums of money to stamp it out, and it has not been stamped out, but is now endemic and spreading through the infection of ground squirrels and rats, which continually infect each other and spread the germs of the disease over enlarging areas.

This opinion of the United States circuit judge was followed with an immediate federal quarantine of the State of California, which was the duty of the government officers in charge under the obligation of the United States to the several states of the Union and to the nations of the world. The Marine-Hospital Service officials in San Francisco declared this quarantine.

The Governor of California, the Senators of California, and the commercial bodies of San Francisco immediately suppressed the Marine-Hospital Service, compelled the Surgeon-General to yield, proved a false case, and made it

temporarily stand as the truth before the country. They furnished evidence and proved (?) that there was no bubonic plague in San Francisco, notwithstanding the fact bubonic plague was there in sober truth.

The Marine-Hospital Service finally persuaded the Secretary of the Interior to cause an inquiry in January, 1901, through experts of the highest class. This unanswerable authoritative report was made on February 26, 1901, finding numerous cases of bubonic plague in the heart of San Francisco. The United States quarantine law (Sec. 4) required its immediate publication. It was suppressed until April 19, 1901, and until it had been given publicity by the Occidental Medical Times, the Journal of the American Medical Association, the Medical News and the Sacramento Bee.

Again the commercial interests of San Francisco triumphed over the bureau and compelled the Surgeon-General, the head of the bureau, by an order of his superior officer, the Secretary of the Treasury, to agree to suppress this report, contrary to the obvious moral and sanitary duty of the United States. From that time bubonic plague has widened the area of its terribly dangerous infection from Los Angeles to Seattle, passing from rat to rat and squirrel to squirrel and from these animals to an occasional human being through the agency of the common flea. Various experts of the Marine-Hospital Service, who immediately after the report of 1901 discovered the infection outside of San Francisco and reported the truth, were by some strange fatality shortly after their several reports removed from such duty faithfully performed and sent to the ends of the world—to Honolulu, to Ecuador, and so forth.

It is a most interesting history, the details of which might with propriety be given to the Senate as showing the destructive power commercial interests can exist over the faithful servants of a subordinate bureau.

The point I wish to emphasize is that the bureau dealing with public health was easily

suppressed by commercialism and its supposed interests, putting in jeopardy the national health, the national honor, and the national wealth and Treasury and required to withhold and suppress the truth in violation of Section 4 of the quarantine laws of the United States.

In 1908 we expended for the suppression of plague, \$228,337.22; in 1909 we expended for the suppression of plague, \$337,403.13; for 1910 we appropriated \$750,000 and \$187,771 unexpended balance—in all, \$937,771—for the prevention of epidemics of cholera, typhus and yellow fever, smallpox and bubonic plague (called also Chinese plague or black death). All of this appropriation was really needed for bubonic plague, which was the only epidemic seriously threatening the United States. Fortunately, we have \$724,000 of this on hand. So, from no danger, Mr. President, in 1901, 1902 and 1903, the danger grew to the request for an appropriation of over \$900,000 in 1910. There has been over a million dollars appropriated and the plague has not been suppressed. The bureau was prevented giving publicity to the truth, and Mazatlan, Mexico, was infected in consequence of no sufficient precaution.

OUR INTERNATIONAL OBLIGATIONS.

A department of public health is absolutely essential in order to deal with this matter and with similar questions with the full power and dignity of this government and in order to faithfully and honorably comply with the state and internationally sanitary obligations of the United States.

The first article of the first title of the International Sanitary Convention of Paris, 1903, with Germany, Austria-Hungary, Belgium, Brazil, France, Spain, Great Britain, Greece, Italy, Luxemburg, Montenegro, the Netherlands, Persia, Portugal, Roumania, Russia, Servia, Switzerland, Egypt, and the United States, is as follows:

ARTICLE I. Each government shall immediately notify the other governments of the first appearance in its territory of authentic cases of plague or cholera.

Particulars are required, constant information provided, and preventive measures showing the opinion of the experts of every nation as to the extreme importance of protecting the world against bubonic plague.

Yet our Marine-Hospital Bureau was prevented from making the truth known, and even in its publications made its notice as obscure as possible for several years. The bureau understood the importance of publishing the truth; the bureau desired to tell the truth, but it was suppressed. I refer to this painful history not to criticise the unhappy, miserable and weak bureau, but to point out the fatal weakness of a subordinated bureau as compared with the dignity and power of a department.

OBLIGATIONS TO AMERICAN REPUBLICS.

The first general International Sanitary Convention of the American Republics, held at the Willard Hotel, Washington, December 2-4, 1902, adopted resolutions of the delegates providing a provisional programme and emphasizing the sanitary convention adopted by the Second International Conference of the American States, held in the City of Mexico October 22, 1901, to January 22, 1902.

The convention of January 22, 1902, approved by the duly authorized delegates of the United States, Mexico, Bolivia, Colombia, Costa Rica, Chile, Dominican Republic, Ecuador, Salvador, Guatemala, Haiti, Honduras, Nicaragua, Peru and Uruguay, pledged the representative governments to co-operate with each other toward maintaining efficient and modern sanitary conditions, and provided:

That each and all of their respective health organizations shall be instructed to notify promptly the diplomatic or consular representatives of the republics represented in this conference of the existence or progress within their several respective territories of any of the following diseases: Cholera, yellow fever, *bubonic plague*, and any other serious pestilential outbreak.

That it shall be made the duty of the sanitary authorities in each port prior to sailing of the vessel to note on the vessel's bill of health the transmissible diseases which may exist in such port at that time.

The Surgeon-General of the United States Public Health and Marine-Hospital Service was president of the convention at Washington of December 2, 1902. Mexico, not having been properly advised of the existence of bubonic plague at San Francisco, as agreed by the international convention of January 22, 1902, Mazatlan was infected, because of such failure of the officers of the United States to honorably comply with this convention.

The apology made for our conduct in this matter by Edward Liceago, president of the superior board of health of the Republic of Mexico (see report, 1903-4, on Public Health, p. 11), says:

The authorities of San Francisco, Cal., fearing that the quarantine restrictions would perhaps impose on their commerce a closure of foreign ports, had carefully concealed the existence of plague and had given clean bills of health to ships leaving that port.

This infection of Mazatlan in December, 1902, took place nearly a year after the United States was bound by the sanitary convention of January 22, 1902, at Mexico City, to give Mexico notice.

What apology shall we offer other nations for such a violation of our international obligations to Mexico? What shall we say to Peru, Colombia, Chile and the other American Republics for this gross breach of public faith?

Will they be content when we say this matter was in the care of a subordinate little bureau, which was thoughtlessly overruled by a secretary not in sympathy with such a subject-matter? What shall we say to the state boards of health of Texas, Indiana, Colorado and other state boards that demanded the report of the experts of the Marine-Hospital Bureau, and were denied the truth as to the bubonic plague in California?

Mr. President, a miserable bureau will not do! It has been tried in the balance and found wanting.

The importance of the subject-matter, the dignity and honor of the United States, its international agreements and the health and

welfare of the world demand a department and a secretary of public health.

TUBERCULOSIS.

Mr. President, Frederick L. Hoffman, statistician of the Prudential Life Insurance Company (Statistical Laws of Tuberculosis, American Medical Journal, 1904), estimates the commercial loss per annum to the United States from tuberculosis alone at \$240,000,000.

Collier's editorial ("Expressed in Money," July 25, 1908) estimates the loss from tuberculosis alone at \$330,000,000 per annum, and says:

Is it any wonder, then, that the best physicians are heart and soul engaged in the study of its prevention?

Mr. Hoffman ("Physical and medical aspects of labor and industry," *Annals of the American Academy of Political and Social Science*, May, 1906) endeavors to establish the approximate measure of the social and economic value of life, and estimates that fifty active years of a working man's life represents a total of \$15,000. If death should occur at the age of 25, the economic loss to society would be \$13,695; at 35, \$10,395; at 50, \$4,405.

Mr. President, I doubt if any member of the Senate would regard this measure of economic value as excessive, yet this estimate would make our preventable death loss equal an annual charge of over \$6,000,000,000.

The annual loss from tuberculosis is a hundred and fifty thousand lives to the United States at the average age of 35 years, a terrific social and economic loss.

Most of this loss could be avoided.

SAVING OF LIFE IN NEW YORK.

I submit a table of the department of health of the city of New York, showing the general death rate from 1886 to 1908, improving from 25.99 to 16.52 per thousand, nearly 10 to the thousand and an improvement of nearly 40 per cent. (Exhibit 2.)

The tuberculosis death rate has improved from 4.42 to the thousand to 2.29 to the thousand, a like improvement.

In Paris the death rate from tuberculosis is twice as great, but, Mr. President, death from tuberculosis in Greater New York alone in 1908 was 10,147 persons, and from all causes 72,072. (Exhibit 3.)

The vast improvement which has been made in the saving of life is clearly shown from the tables to which I call the attention of the Senate. (Exhibit 4.)

I submit, also, Table No. 3, showing a great improvement in the death rate of children under 1 year of age during the summer months, from 1891 to 1909, in which the death rate has been decreased one-half. (Exhibit 5.)

I submit Exhibit No. 6, the method of the department of health, in controlling tuberculosis.

I particularly desire to submit to the Senate for their physical inspection certain maps showing the number of cases of tuberculosis in certain down-town sections of New York City, in the Cherry and Market streets quarters and Cherry and Pearl streets neighborhood and the immense improvement obtained by a few years of effort. (Exhibits 7, 8, and 9.)

You will observe that in one house as many as 22 cases of tuberculosis is reported. Such a section of a great city may be properly described as a charnal house, where the poor are denied a fair opportunity of life by the grinding processes of unthinking commercial energy and power, and are dying by thousands when they might be saved to the great economic gain of the United States, to the great financial and commercial advantage of this nation. I do not make an appeal on the basis of humanity and patriotism alone, but I put it upon the cold basis that ought to appeal to the commercial instinct of the nation, even if it seems to have forgotten the value of human life and of human happiness.

PRESENT COST OF HEALTH AGENCIES OF

UNITED STATES.

The United States made appropriations for the present fiscal year for sanitary and health

purposes in the following amounts, as nearly as I can ascertain:

Department of Commerce and Labor..	\$ 533,000 00
Navy	1,827,428 00
War	6,400,734 00
Treasury	2,512,733 00
Interior	1,748,350 00
Agriculture	1,275,820 00
State	3,495 79
Bureau of Public Printer	7,270 00
District of Columbia	663,680 00
Total	\$14,972,320 79

A total of nearly fifteen millions. This does not include the service in the Philippine Islands, Porto Rico, Cuba, nor 114 physicians, nor 28 nurses among the Indians, nor the one hundred and odd clerks in the medical division of the Pension Office, nor the medical attention to sick prisoners, nor for the collection of medical statistics by the Census Bureau.

There appear to be over 12,000 persons employed in this service, not including those engaged in Porto Rico, Cuba, Panama, the Philippines, nor in the Agricultural Department.

These agencies ought to be consolidated in one bureau. It meets the best opinion in the United States.

The people of the United States are ready to support a department of public health and will indorse this general policy of concentrating all of the health agencies of government. "A department of public health" has been indorsed by the National Grange (Des Moines, 1900); by the American Federation of Labor, with about 2,000,000 members; by the American Medical Association, with about 80,000 physicians and surgeons affiliated; by the National Child-Labor Committee; by the Conferences of Governors; and in one form or another by every political platform.

The Republican platform for 1908 says:

We commend the efforts made to secure greater efficiency in national public health agencies and favor such legislation as will effect its purpose.

The Ohio Republican platform of this year declared in favor of—

The organization of all existing national public

health agencies into a single national public health department.

In Connecticut and other States similar declarations have been made.

The Democratic platform in 1908 in like manner states:

We advocate the organization of all existing national public health agencies into a national bureau of public health, with such power over sanitary conditions connected with factories, mines, tenements, child labor, and such other conditions, connected within jurisdiction of Federal Government—and which do not interfere with the power of the States controlling public health agencies.

The Committee of One Hundred of the American Association for the Advancement of Science and the American Medical Association, with 80,000 members, advocate a plank in a national platform in sentiment as follows:

Believing a vigorous, healthy population to be our greatest national asset, and that the growth, power, and prosperity of the country depends primarily upon the physical welfare of its people and upon their protection from preventable pestilences of both foreign and domestic origin and from all other preventable causes of disease and death, including the sanitary supervision of factories, mines, tenements, child labor, and other places and conditions of public employment or occupation involving health and life, we advocate the organization of all existing national public health agencies into a national *department of public health*, with such powers and duties as will give the Federal Government control over public health interests not conserved by and belonging to the States, respectively.

THE CONSERVATION OF LIFE, HEALTH, AND EFFICIENCY.

Mr. President, I believe in the conservation of our natural resources—of our coal fields, oil and gas fields, water powers, forests, and mines; the development of our natural resources in establishing good roads and improving our waterways.

The conservation of these great natural resources of our national wealth are of great importance, but the conservation of the life of our people is of far greater importance, and the conservation of the vitality and efficiency of our people is a problem of the first magnitude, demanding immediate intelligent attention.

I earnestly invite the Senate to consider Senate bill No. 6049 and the Report on National Vitality, by the Committee of One Hundred on National Health, which has been published as a Senate document and which gives in a compact form the essential principles relative to this matter, an abstract and summary of which I insert as Exhibit 1.

Under a department of public health these problems can be worked out with far greater efficiency. The cooperation of the authorities of the several States of the Union and of the municipalities of the several States, each one operated along the lines of constitutional propriety, can be established by a department of public health with much greater efficiency than through a subordinate bureau.

Indeed, under a subordinate bureau such cooperation is impracticable. The bureau has not sufficient dignity or power in an emergency. It has no national standing. It cannot take the initiative, but must always stand subject to the orders of a Secretary too greatly influenced by mere apparent commercial and fiscal interest. A bureau of public health so controlled is pitiful, if not despicable, as an agency of an enlightened nation.

Mr. President, I present this matter to the Senate with no pride of authorship, because I deserve no credit in that respect, and am perfectly willing to assist a bill drawn by any other Senator which shall better accomplish the purposes which I have at heart.

I realize that my colleagues are intensely preoccupied with the multitude of demands upon their time and attention.

But this is a question of vast national importance. In eight years we have increased our expenditures over the average of preceding years by the huge sum of one thousand millions for the army and navy, and are spending 70 per cent of the national income to cover the obligations of past wars and the preparation for possible future war, or about seven hundred millions per annum. But for war on preventable disease now costing up infinite treasure in life, efficiency, and commercial

power and prestige we spend nothing and do not even employ the agencies we have in an efficient manner.

In the name of the people and in the name of the American Medical Association, whose members are the faithful and self-sacrificing guardians of the health of our people, and in the name of the Committee of One Hundred, of the American Federation of Labor, of the National Grange, and of the various health boards of the 46 States of the Union and of the great body of learned men desiring improved sanitation and the application of the improved agencies of preventing disease, disability, and death, I pray the Senate to establish a department of public health.

The principle of the bill meets the general approval of the public health societies and of the medical associations of the United States, and there should be no difficulty in perfecting this bill and in impressing upon the country the importance of organized effort to control

the ravages of tuberculosis, typhoid and malarial fevers, bubonic plague, and other preventable diseases, which inflict such enormous injury upon the people of the United States, impose such vast, but needless, human misery and pain, with great financial loss of prestige and power.

A commercial nation will not be unmindful of the commercial value of the saving of life and efficiency possible, which is worth \$3,000,000,000 per annum.

A humane nation will not fail to act when it is known that we could save the lives of 600,000 of our people annually, prevent the sickness of 3,000,000 of people per annum, who now suffer from preventable disease, and greatly abate the volume of human pain, misery and death.

I trust, Mr. President, that the Senate may not fail to take action in regard to this matter at the present session.

ANIMAL EXPERIMENTATION.

M. J. Rosenau, Washington, D. C. (*Journal A. M. A.*, January 8), shows the value of animal experimentation in the diagnosis of disease and cites a number of disorders in which it is essential. First as regards tuberculosis, in which we have often to resort to animal experimentation in order to establish the early diagnosis which is requisite for successful treatment. The sacrifice of one guinea-pig will often save a human life by the recognition of the disease. In typhoid, the ultimate recognition of the typhoid bacillus depends on the use of the specific agglutinins. These are usually obtained from the horse or the rabbit and laboratories now use large quantities of the serum thus derived to enable the physician to make an early diagnosis of the disease. The only positive method of typhoid recognition rests on animal experimentation. With cholera it is the same story. It is impossible to recognize mild cases clin-

ically, and bacilli-carriers are common. A single one may infect a whole community and for successful prevention the specific serum is an absolute necessity. In rabies the early diagnosis is life-saving and neglect fatal. The more experienced one becomes in the diagnosis of this disorder, the more does he depend on and recognize the value of animal experiments. In plague the diagnosis of the disease with certainty is constantly being made by this method and is indispensable. The preventative measures are entirely based on it. In diphtheria and tetanus it is often useful as there is a whole group of organisms closely resembling the diphtheria bacillus and their true nature cannot be determined without experiments on animals. The shape and growth of the tetanus bacillus is not sufficiently characteristic to be final. Other diseases mentioned in which this method is often required are septicemia, glanders, anthrax, etc., and a large class of animal parasitic disorders.

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A TRIBUTE TO DR. J. Y. CRAWFORD

On the part of the Editor-in-Chief, his life-long
friend.

The old axiom, that "death loves a shining mark," was never better illustrated than in the taking off of Dr. J. Y. Crawford on April the 5th.

Physician and dentist, but above all, a broad-minded humanitarian, whose success and preferment were a living example of what a poor boy, born of good Christian parentage can make of himself, notwithstanding adversity. With want almost amounting to poverty, which came upon him in his early youth, owing to the Civil War, taking from him the means of an early education, for which his soul yearned, even to the day of his death, he still became one of the greatest dental surgeons of his time.

He was born at Rogersville, East Tennessee, in 1848. Early in life, he received those impressions from God-fearing parents, his father being a Methodist minister, and his mother one of those strong characters which were so characteristic of the women during the dark period of the sixties, which guided and influenced his every act throughout his honorable career. Entering the Confederate army as a mere boy, too young to carry a gun, but with that valor and bravery which has ever stamped the Confederate soldier as a hero and martyr to a cause he thought was

just, he served until the end of the war with fidelity, and after the war was early imbued with the idea that the past must be forgotten, in so far as strife and sectionalism was concerned. He took up life amid all of the surroundings of desolation, and determined to make the most of his natural talents for the benefit of his fellow-man. While being handicapped by the lack of an early education, he inherited a strong mind and a brave heart, which enabled him to enter the study of dentistry, very early, in the office of a preceptor, as was the custom in those days; practicing throughout the country, he accumulated sufficient money to take his courses in the dental department of the University of Tennessee, where he graduated with distinction in the year 1880. From the very first he realized that dentistry was a specialty of medicine, and to better fit himself for its scientific practice, he took a course in medicine, graduated from the same institution with the title of M.D., a few years later. Removing to West Tennessee, he began the real practice of his profession in McKenzie, where he soon established a reputation for skill and conscientious work beyond the bounds of that locality, and while yet a young man, he moved to Nashville, accepting a chair in the dental school of his Alma Mater. He at once established himself not only as a teacher of great power, but as an individual thinker, far in advance of his profession.

Few men have been so honored by the profession of their chosen work; having been the president, first of his state society, his broad learning and great force of character soon made him a national figure, and the National Association conferred an honor upon him which is distinguishing even to the present day, in the fact that they made him president

of that great body two years in succession. It was largely through his influence, in association with a few others, that the International Dental Congress was brought to this country with such signal success, marking an epoch in the development of international feeling and progressive, higher thought in the dental world.

Dr. Crawford was a man of great intensity and earnestness. Sincere and honest in all of his dealings; especially was he strong in his patriotism. Only last year, in a trip to Europe with the author, he often referred with pride to the fact that our own country was superior to the old world in every respect; and to him the grandest achievement of all, was to be a leader in progressive dental thought. He was a great figure, and was shown marked courtesies, because of his distinguished services to his profession in the International Dental Congress, in Berlin, last summer. He had that rare faculty of being a deep thinker, and yet an orator of great force, by which he made things felt before any body of scientific men. And while he shone with great brilliancy to the entire dental world, he was found at his best a family dentist, each child receiving his personal, careful attention, each patient conscientiously attended to, with a skill characteristic of the earnestness and enthusiasm of the man. He often remarked that he finished each case as though it was the last, giving his best service to any and all in the hope that his work would be a lasting monument to his skill, and to the broad-minded and high ideals of his profession. And while he practiced dentistry as a specialty, it can be truthfully said that he was never happier than when attending a medical society, listening to all kinds of scientific discussions, always taking part in those directly associated

with his work. He was especially interested in the preservation of the teeth of children, and his contributions on these subjects have proven that they are not only health giving and life-saving, but are among the most practical and best gifts to his profession.

He was particularly conspicuous as a teacher and doubtless has done more to impress the advanced thought of his day upon his students than any teacher in the South. His enthusiasm was infectious and every man who came under the spell of his magnetic influence rarely forgot his impressive lessons of practical value, and was uniformly imbued with the great responsibilities and nobility of his calling. He was perhaps the most arduous and tireless worker in his profession. As an operator he was rapid and skilled in the intrepidity of a ripe experience. He was an operative genius. There was a distinctive character to his work and it has been said by a patient returning from abroad, that while in Paris and needing dental services, a dentist there on seeing some work, remarked, "That was done by Dr. Crawford, of Nashville. No one else in the world could do that as well as he."

As a friend, he was loyal and true. As a husband, he was kind and gentle. As a father, he was affectionate and companionable. "To know him was to love him."

It is a benediction and an inspiration that such a man as J. Y. Crawford should have lived and wrought!

A BILL FOR ESTABLISHING A DEPARTMENT OF PUBLIC HEALTH AND THE APPOINTMENT OF A SECRETARY OF PUBLIC HEALTH AS A CABINET OFFICER.

(Introduced February 1, 1910.)

Be it enacted by the Senate and House of Representatives of the United States of

America in Congress assembled, That there is hereby established a Department of Public Health under the supervision of the Secretary of Public Health, who shall be appointed by the President a Cabinet officer, by and with the consent of the Senate, at a salary of twelve thousand dollars per annum, with like tenure of office of other Cabinet officers.

SEC. 2. That all departments and bureaus belonging to any department, excepting the Department of War and the Department of the Navy, affecting the medical, surgical, biological, or sanitary service, or any questions relative thereto, shall be combined in one department, to be known as the Department of Public Health, particularly including therein the Bureau of Public Health and Marine Hospital service, the medical officers of the Revenue Cutter Service, the medical referee, the assistant medical referee, the surgeons and examiners of the Pension Office; all physicians and medical officers in the service of the Indian Bureau, or the Department of the Interior, at old soldiers' homes, at the Government Hospital for the Insane, and the Freedman's Hospital and other hospitals of the United States; the Bureau of Entomology, the Bureau of Chemistry and of Animal Industry of the Department of Agriculture; the hospitals of the Immigration Bureau of the Department of Commerce and Labor; the emergency relief in the Government Printing Office, and every other agency of the United States for the protection of the health of the people of the United States, or of animal life, be, and are hereby, transferred to the Department of Public Health, which shall hereafter exercise exclusive jurisdiction and supervision thereof.

SEC. 3. That the official records, papers, furniture, fixtures, and all matters, all property of any kind or description pertaining to the business of any such bureau, office, department, or branch of the public service is hereby transferred to the Department of Public Health.

SEC. 4. That the Secretary of Public Health

shall have supervision over the Department of Public Health, and shall be assisted by an Assistant Secretary of Public Health, to be appointed by the President, by and with the advice and consent of the Senate, at a salary of six thousand dollars a year, with such duties as shall be prescribed by the Secretary not inconsistent with law.

SEC. 5. That the Secretary of Public Health shall be authorized to appoint such subordinates as may be found necessary. There shall be a chief clerk appointed at a salary not to exceed three thousand dollars a year, and such other clerks as may from time to time be authorized by Congress.

SEC. 6. That the officers and employes of the public service transferred to the Department of Public Health shall, subject to further action by Congress, receive the salaries and allowances now provided by law.

SEC. 7. That it shall be the duty and province of such Department of Public Health to supervise all matters within the control of the Federal Government relating to the public health and to disease of animal life.

SEC. 8. That it shall gather data concerning such matters, impose and enforce quarantine regulations; establish chemical, biological, and other standards necessary to the efficient administration of said department, and give due publicity to the same.

SEC. 9. That the Secretary of Public Health shall establish a Bureau of Biology, a Bureau of Chemistry, a Bureau of Veterinary Service, a Bureau of Sanitary Engineering, reporting such proposed organizations to Congress for suitable legislation relative thereto.

SEC. 10. That all unexpended appropriations and appropriations made for the ensuing year shall be available on and after July 1, 1910, for the Department of Public Health, where such appropriations have been made to be used by any branch of the public service transferred by this Act to the Department of Public Health. It shall be the duty of the Secretary of Public Health to provide, on proper requisition, any medical, sanitary, or

other service needed of his department required in another department of the government.

SEC. 11. That any other department requiring medical, surgical, sanitary, or other similar service shall apply to the Secretary of Public Health therefor wherever it is practicable.

SEC. 12. That all officers or employees of the government transferred by this Act to the Department of Public Health will continue to discharge their present duties under the present organization until July 1, 1910, and after that time until otherwise directed by the Secretary of Public Health or under the operation of law.

SEC. 13. That all laws or parts of laws in conflict with this Act are hereby repealed.

Above we have quoted in full the bill of Senator Owen, of Oklahoma, which in our opinion is a marked step in advance, an action the medical profession has long contended for, viz.: a national board of health with its head a member of the Cabinet of the United States, carrying with it all of the prerogatives and financial backing which that position carries in other departments. It has long been a reflection on our government for progressive thought and our position among the countries of the world as leader, that so little attention should have been paid to the health of our people. The best asset a country can possibly have is a strong, robust, healthy people as its subjects, and there can be but little doubt that if this country should take this step in advance it would initiate a better state of health and sanitation, which, as is well known, is essential to the welfare and health of any people. This is especially true since the cause of so many infectious and contagious diseases are known, and which hitherto have made excursions throughout our country in epidemic form. This can and will be con-

trolled, if not entirely prevented, by systematic and scientific application of the laws of preventive medicine. With a strong man at the head of this department and a well organized corps of officers with national resources together with the prestige of our national government this country would be insured against invasions of epidemic diseases in the future.

When we consider the loss of life together with the thousands of dollars expended in the past to stop epidemics of yellow fever, cholera, etc., and estimate the effect of these epidemics in the past on business all over this country, it will be seen at a glance that the expense of such an organization will be a mere bagatelle compared to the losses both in wealth and human life.

With this great progress in preventive medicine made in the last decade, together with the thorough awakening of the people to the fact that tuberculosis and typhoid fever are preventable diseases, is it too much to expect that under a systematic education and the passage and enforcement of such laws, as those suggested by the wonderful advance in the prevention of disease, that such an organized body can practically stamp out these scourges, which are yearly claiming thousands of lives at the very age when they should be developing into useful citizens? It is also a great honor to the medical profession that they by unselfish devotion to their calling should have so impressed the political world with the importance of a general protecting care of the entire people and the particular demonstration which we as a profession have shown of the possibilities of preventive medicine with sufficient force to suggest the appointment of a Secretary of Public Health; the establishment of which will not only save thousands of lives and millions

of dollars to our people, but will be an everlasting monument to the self-sacrificing labors in uplifting the people.

We would suggest that every doctor in this broad country make it his business to see his Representative and Senator and use every possible argument for the favorable consideration of this bill.

Our country has long had supervision over its agricultural interests and it would seem to any sensible man that the health and lives of its people are of greater importance than its lower animal and vegetable kingdom.

THE JOURNAL desires to go on record as heartily endorsing the above bill and sincerely believes that if the medical profession of the United States will as a man use its influence for the establishment of a Cabinet member, and a national board of health under his direction, that it will be a sure method of bringing about its passage.

All honor to Senator Owen and his colleagues for the broad humanitarianism which suggested this bill and may we not assure him of the gratitude and support of the entire medical profession? J. A. W.

THE GREAT BLACK PLAGUE.

During the past few years the attention of the whole world has been focused upon the "Great White Plague" as never before upon a health problem. Great work has been done

and great results accomplished. Already, it is asserted, the death rate has been reduced more than 25 per cent.

But the Great *Black Plague*, though in morbidity certainly and in mortality probably even more devastating, continues to be ignored or tabooed, and the harvest of destruction goes on. Of special significance in this connection is a striking contribution from the pen of a Nashville minister which appears in this issue. What is said therein as to the conditions prevailing in Nashville applies with equal force to every other city. And certainly the picture drawn is dark enough to appall the most hardened and arouse the most indifferent.

It is not our purpose at this time to discuss the measures and methods suggested for making war upon the evil, but to emphasize the fact that the medical profession has a part to play in that war. The prophylaxis of venereal disease as truly belongs to the physician as do the etiology, pathology and treatment, and his duty in the premises comprehends something more than personal advice, which, however sound, is notoriously ineffective. When physicians awaken to a due sense of their responsibility upon the subject and yield an active, earnest co-operation in the work of reform, the problem will become less hopeless. And not until then.

A. B. C.

MEDICAL SOCIETIES.

THE TENNESSEE STATE MEDICAL ASSOCIATION.

The Seventy-seventh Annual Meeting of the Tennessee State Medical Association was held in Memphis, April 12-14. The program presented was one of unusual interest. Perhaps the leading feature of the program, as to public importance, was an open session on the evening of the first day of the meeting. This session was devoted to the discussion of the hookworm disease. The association and the public in general were fortunate in having an opportunity to hear a presentation of this subject by Dr. Chas. W. Stiles, of the United States Marine Hospital Service, who has been for some years interested in this question and has devoted a large amount of time and labor in investigating its origin, its distribution, its symptoms and general clinical manifestations as well as the best methods of contending with this rather wide-spread disease. The symptomatology and diagnosis of the disease was discussed by Dr. George Dock, of Tulane University, who presented this phase of the question in a most interesting way, both to the public and the profession. In addition to these distinguished visitors, Dr. Louis Leroy, of Memphis; Dr. G. Newton Evans, of Nashville, and Dr. William Litterer, of Nashville, read papers upon the various phases of the subject, such as clinical manifestations, pathology and study of the non-oviparous female hookworm. Dr. Litterer's remarks were especially directed to the latter phase of this question. Pellagra with reports and exhibition of cases also contributed largely to the interest of the meeting. In addition to these special features which are now commanding so much attention on the part of the public, the health authorities and the profession in general, the program was one replete with interest to each and every member of the profession, giving as it did a large number of special subjects. There were also interesting papers with special reference to questions involved

in medical education and higher standards of medical education.

Although the attendance was not so large as had been anticipated and all papers appearing on the program were not presented, yet the meeting was one of peculiar interest and afforded ample opportunity for everyone present to either give expression to his views or to reap a rich harvest from views and experiences of others.

The officers elected at this session for the present year were as follows: President, Dr. J. A. Witherspoon, Nashville; Vice Presidents, Dr. J. J. Waller, East Tennessee, Oliver Springs; Dr. R. A. Barr, Middle Tennessee, Nashville; Dr. Eugene Rosamond, West Tennessee, Memphis; Secretary-Editor, Dr. Geo. H. Price, Nashville; Treasurer, Dr. W. C. Bilbro, Murfreesboro; Delegate to the American Medical Association, Dr. L. A. Yarbrough, Covington; alternate, Dr. J. D. Brewer, Newbern; Dr. S. S. Crockett, Nashville; alternate, Dr. L. M. Woodson, Gallatin; Dr. S. R. Miller, Knoxville; alternate, Dr. B. D. Bosworth, Knoxville. Board of Trustees of Journal, Dr. W. C. Bilbro, Murfreesboro; Dr. E. C. Ellett, Memphis; Dr. B. D. Bosworth, Knoxville.

NASHVILLE ACADEMY OF MEDICINE AND
DAVIDSON COUNTY MEDICAL SOCIETY.

The annual meeting of the Academy occurred on the second Tuesday of April, at its home in the Carnegie Library Assembly Room.

The retiring President, Dr. Duncan Eve, delivered the annual address, and chose for his subject the "*Treatment of Fractures.*" He has been for so long an authority upon this subject that his address was listened to with marked interest. It was a comprehensive, yet practical discussion of an important question that reflected great credit upon the distinguished writer.

The election of officers resulted as follows: President, Dr. J. M. King; Vice-President, Dr. Robt. Caldwell; Secretary, Dr. W. C. Dixon.

The ensuing year's program promises to be a very attractive one, and the Academy hopes to enter upon an increased era of usefulness. A high class of scientific work has been accomplished during the last year, and with renewed interest and activity, a larger measure of efficiency has been attained.

The Library feature, including all of the latest medical journals, is increasing in popularity, and serves even an additional degree of helpfulness to the profession of Nashville and Davidson County.

The annual banquet which the Academy would have had on this occasion was deferred on account of the death of one of its Ex-Presidents and most enthusiastic members, Dr. J. Y. Crawford.

BOOK REVIEWS

Listing of books and pamphlets received is considered full compensation. Reviews will be made at the discretion of the staff.

CONSTIPATION AND INTESTINAL OBSTRUCTION.

By Samuel Goodwin Gant, M.D., LL.D., with 250 original illustrations. Published by W. B. Saunders Co.

This treats of "the American disease" in an American fashion. It would be difficult to overestimate the value of this work if properly understood and practiced by the profession as a whole. It might be described as the drugless treatment of constipation and obstipation. The drug treatment of these disorders, by the physicians is unsatisfactory enough, but by the patient it may be exceedingly harmful. Especial attention is paid in this work to the chronic obstructions, not serious enough to urgently demand surgical relief, and still so severe that ordinary measures against constipation are futile. This work, however, contains a rather complete description of the so-called medical treatment, but the greatest stress is placed upon adequate examination, to determine which of the several factors are responsible for the given case. There is no one cause, and no one treatment, but many causes, and each should have its appropriate remedy. A careful effort is made to discriminate clinically between constipation and obstipation. The former exists year in and year out, while in chronic obstruction con-

stipation alternates with diarrhea. Sometimes one complains of mucous and blood, and frequently fragments of tissue. Purgation increases peristalsis, and hence increases the pain, because of the inability to pass the obstruction which is always at a definite point. Chronic mechanical obstruction occurs mostly in middle life, or old age; begins suddenly, usually follows ulceration of the bowels, operations, typhoid fever, appendicitis or peritonitis.

There has been an erroneous impression among some practitioners with regard to fecal impaction. It is nearly always in the rectum, or descending colon, is a chronic condition, and rarely acute. It seems incredible that men could consider this as an explanation of acute cases of appendicitis, or real intestinal obstruction. In considering treatment, the author expresses it as "no light task, and in order to cure chronic constipation, in its various aspects, physicians must possess great patience, ingenuity, exceptional diagnostic ability, and most thorough medical training." Prescription treatment is notoriously disappointing.

The dietetic treatment is discussed fully, as is also exercise and bodily movement, together with hydrotherapy externally, also internally. Massage is given its full place, and mechanical

vibration, with the ordinary vibrators, as well as the Zander machines, including "the horse," and abdominal roller. Electricity by static machine and sinusoidal currents are advised. The application of these various measures goes to show that it requires considerable equipment to treat the badly neglected cases successfully and afford permanent relief.

There is rather a complete formulary appended to the medical treatment.

The intestinal operations are described rather well, nicely illustrated, and comprise about all that would be found useful in many more pretentious works upon surgery. The chapter upon surgical treatment or mechanical constipation, as well as that upon the surgical treatment of the diseases of the anus, are concise, and yet complete. This contains a full exposition of the author's method of local anaesthesia in the minor operations upon these structures.

After all, it is an illuminating book upon a subject that has given most dismal results in the past, and is a plea as well as a practical guide to the unraveling of the cause of each individual case, with a thorough and adequate description of the methods that have proven of avail in each pathologic condition responsible for constipation or obstipation.

W. D. H.

Diseases of Children. Edited by Araham Jacobi, M. D., L. L. D., Consulting Physician Mt. Sinai, Bellevue, German, Babies, Hospitals, etc. Translated by J. L. Salinger, M. D. Pp. 828, with thirty-four illustrations, New York, D. Appleton & Co., 1910

This book, different from the usual style of text-book, is a compilation of monographs from eighteen different German and Austrian masters, as follows: "Diseases of the New-

born in the First Days of Life," by C. Keller; "The Feeding of Children," by Ad. Czerny; "The Most Common Infection of the Oral Mucous Membrane in Children," by A. Monti; "Acute Digestive Disturbances of Infancy," by Th. Escherich; "Chronic Digestive Disturbances of Infancy" and "Chorea Minor," by B. Bendix; "Infantile Scurvy" and "Functional Nervous Diseases of Infancy," by H. Neuman; "Rickets" and "Diseases of the Nose and Pharynx Peculiar to Infancy," by J. Zappert; "Infantile Scrofulosis and Tuberculosis," by O. Soltmann; "Hereditary Syphilis," by H. Finkelstein; "Speech Disturbances of Childhood," by H. Gutzmann; "Convulsions of Children," by K. Hochsinger; "Meningitis of Infancy and Hydrocephalus," by O. Kohts; "Infantile Spinal and Cerebral Paralysis," by A. Hoffa; "Pneumonia of Children and Its Treatment," by E. Henoch; "Rotheln," by Ch. Baumler; "Measles" and "Scarlet Fever," by O. Heubner; "Diphtheria and Diphtheritic Croup" and "Whooping Cough," by A. Baginsky; "Mumps," by H. Falkenheim.

Each article is complete in itself, with the possible exception of treatment in some instances, and if one could criticise at all this excellent book it would be the almost total absence of references to American Authors on Pediatrics, which Dr. Jacobi has toned down to some extent. The chapter on the "Diseases of the New-born in the First Days of Life," by Keller, is especially interesting. Each and every article is characteristic of the thoroughness of the Germans, and the capable editing of Dr. Jacobi, with the easy translation of Dr. Salinger, should make this book satisfactory to the most critically interested in disease, as seen in infancy and childhood.

A. S. D.

ABSTRACTS OF CURRENT LITERATURE

SURGICAL.

THE USE OF SPINAL ANESTHESIA IN RECTAL SURGERY.

By Collier F. Martin, M. D., Philadelphia.
(The Proctologist, September, 1909.)

The author reports eighty-seven cases in which tropacocain and stovaine were employed. The technic is given in detail. The method is not recommended where the hips of the patient have to be elevated.

Of the eighty-seven cases, fifty-seven were either frankly tubercular or the condition was suspected, sixteen were alcoholics, four had anemia with from 35 per cent. to 60 per cent. of hemaglobin, two had sepsis, two cachexia, two were suffering from general debility and old age, three had cardiac complications and one refused to take ether.

The conditions operated upon were as follows: Abscess and fistulae, 54; hemorrhoids, 21; rectal stricture, 2; sacral sinus, 1; fissure with fistula, 2; gangrenous cellulitis, 2; anal condylomata, 2; rectal carcinoma (perineal excision), 2, and Ball's operation for pruritus ani, 1.

The only complications observed were headache, 18 times, coming on from 1 to 3 days after operation. Only three cases had severe headache lasting over one or two days. A few cases complained of some stiffness of the back of the neck and shoulders. One patient developed a temporary oculo-motor palsy which recovered under treatment. In two cases spinal fluid was not obtained because of the difficulty in inserting the needle with spinal deformity present.

Spinal anesthesia was selected in cases with pulmonary tuberculosis to avoid the congestion following the use of ether. Alcoholics were also found easier to manage than when ether was used.

Under spinal anesthesia, the sphincters are completely relaxed, there is no muscular spasm and there is an entire absence of the

venous engorgement and swelling of the tissues so often seen while the patient is under ether. Bleeding is not as profuse and is more easily controlled, since all parts of the rectal cavity are as accessible as their anatomy will permit. The complete muscular relaxation reduces the traumatism to the tissues.

Spinal anesthesia is at its best when used in operations about the rectum and genito-urinary tract. Careful selection of cases, drugs of uniform strength and purity, and a careful technic will do much to re-establish the confidence of the surgeon in this method of producing anesthesia.

A. B. C.

TREATMENT OF PRURITUS ANI, WITH A CONSIDERATION OF ITS PATHOLOGY AND ETIOLOGY.

By William M. Beach, A. M., M. D., of
of Pittsburg. (The Proctologist, September, 1909).

The following conclusions were drawn by the author:

1. That pruritus ani occurs in mild and severe form; mostly in middle life; the mild type with simple pruritus, the severe type with marked eczema and skin changes.

2. Certain aberrations in general metabolism, or in adjacent structures are simply incidental and should be considered as complications.

3. Intra-rectal growths, as hemorrhoids, adenomas, etc., or the presence of parasites are contributory.

4. The distinct pathogenesis of pruritus ani consists of single or multiple burrowings from the anal pockets, emitting a serous or sero-purulent substance, which sinus may be complete or blind and is always accompanied by proctitis, and frequently by cryptitis, and small ulcers at the ano-rectal line.

5. These sinuses when complete are the sequelae to an abscess history, but the origin of the blind recesses is in doubt, and yet it is

not unlikely due to an infection by the colon bacillus.

6. The treatment is surgical for the purpose of obliterating the sinuses, correcting a rigid sphincter when necessary and curing the proctitis and ulceration.

7. Gastro-intestinal and general metabolic disturbances must be met by rational measures.

A. B. C.

MAMMARY CANCER.

J. N. Jackson, Kansas City, Mo. (*Journal A. M. A.*, January 15), refers to his former paper (*The Journal A. M. A.*, March 3, 1906), where he describes his technic for breast amputation. He has put this method to the fullest possible tests in the three years since his first publication and has supplemented his own experience with numerous testimonies from other surgeons. He republishes therefore his former description, embodying also some slight modifications which he thinks add to its value and also illustrates it rather fully. The operation will be much better understood by reference to the illustrations. He believes that his method has the following advantages: 1. The drawing of the skin from the floor of the axilla up to the arm does away with the axillary fossa and thus also with the large space which Nature would have to obliterate with the formation of scar tissues, with the resulting pressure on the axillary vessels and nerves and he thinks this method of obliterating axillary space is possibly the most important point in his whole technic. It does away with any possible contraction of the skin, fixing the arm to the chest and the early and complete restoration of the function of the arm is striking. The flap forms a covering for the chest defect also, as a rule without any tension, and thus does away with the necessity of grafting so common with the other methods. The objections which have been made by some that his technic excludes thoroughness of excision he considers groundless. He says: "In my method the entire breast skin is removed. Can anything

more be required?" He denies any intention on his part of sacrificing thoroughness and accounts for the skin recurrence credited to it by Rodman by saying that he is deeply impressed with the view that many cases of local recurrence are really cases of cancer implantation from cancer cells escaping during operation and becoming implanted on the healthy tissues of the susceptible individual. Skin recurrences will occasionally occur after any cancer operation. The ligation of all vessels at their nearest point of origin practically makes the operation almost a bloodless one, doing away with the use of a large number of hemostatic forceps with the consequent inconvenience and loss of time. He has never exceeded an hour in the operation himself, and has performed it in forty minutes. The entire technical portion of the operation is completed before the chest is exposed by removal of the breast, thus avoiding long exposure of an enormous area of raw chest surface and the attendant shock. As soon in fact as the breast is removed the wound is ready to be closed.

TRIFACIAL NEURALGIA.

After referring to an earlier communication on the subject (*Journal A. M. A.*, Nov. 9, 1907), Hugh T. Patrick, Chicago, in the *Journal A. M. A.*, December 11, gives his further experience with deep injections of alcohol for the relief of trifacial neuralgia. While not ideal, he claims it is simple, effective in relieving pain, and practically free from serious danger. He uses, as before stated, a straight needle about 10 cm. long fitted with a stylet. The sharp point is used to puncture the skin after which the stylet is pushed forward, thus penetrating the tissues with a blunt instrument. The needle is introduced at the lower border of the zygoma, the object being to reach the inferior maxillary division of the nerve at its emergence from the foramen ovale (about 4 cm. deep), and the superior maxillary as it leaves the foramen rotundum (about 5 cm. deep). He has abandoned deep injection

tions of the supraorbital branch as being too hazardous. When injection of this branch is needed he uses a "peripheral" injection at the supraorbital notch and in a few cases he has also used a "peripheral" injection at the infra-orbital foramen. The solution used is about 85 per cent alcohol with four grains of cocaine to the ounce, and of this about 2 c.c. are used each time. He has abandoned the use of morphin and chloroform in the solution, as also the use of 75 per cent alcohol for the first injection. The 23 cases reported elsewhere are included in those of which brief detail is given in this paper. In all, more or less relief was secured though in some the pain recurred. The danger is, he thinks, as nearly nil as possible. There have been no fatalities and in only three cases troublesome complications (hematoma, ocular paralysis, keratitis, and corneal ulcer). In a very large proportion there was no return of the pain. Most of his cases have been office cases and an anesthetic was rarely needed. There is no shock. He does not claim radical cure, though he thinks that occasionally occurs. A good injection, as shown by marked analgesia, may be expected to give relief for from 2 to 3 years, possibly more. He considers that in the majority of cases it is the simplest, least hazardous and best treatment.

POLIOMYELITIS.

Referring to their previous note published in *The Journal A. M. A.*, Nov. 13, 1909, p. 1639, in which they reported the transmission to monkeys of epidemic spinal paralysis of children, W. Flexner and P. A. Lewis (*The Journal A. M. A.*, Dec. 4, 1909), now report results with a second virus, supplementing the results with the former one. They find that it is not necessary that the virus should be introduced into the brain, but that successive transmission is possible by way of the peritoneal cavity and by intravascular and intraneural injections. Other routes are conceivably possible, among which they mention the skin, the respiratory passages and the di-

gestive tract. Further investigations are necessary to establish this point.

DERMATOLOGY

FULGURATION—THE LOCAL APPLICATION OF A CURRENT OF HIGH FREQUENCY BY MEANS OF A POINTED METALLIC ELECTRODE. ITS USE IN DERMATOLOGY.

By MacKee (*Jour. Cut. Dis.*, June, 1909).

Fulguration has excited considerable interest among the profession. The word as used by Pozzi and Keating-Hart is better understood when it is stated that it means the use of the high frequency current by means of a pointed metallic electrode. The spark applied in this way may be either mildly or strongly escharotic, caustic or destructive, according to the strength of the current, length of the spark and duration of the seance.

A good coil with the high frequency accessories constitute the equipment. If an insulated metallic electrode is used to apply the high frequency discharge to the skin the immediate effect is a pronounced vasoconstriction, evidenced by a blanching of the issue. This in turn is followed by a severe hyperaemia, and, if the part is vascular, an exudation of serum will occur. A scab usually forms in a day or two which separates in about a week without leaving a visible scar unless the treatment has been far too vigorous. By employing a heavy current instantaneous necrosis may be obtained. From a fraction of a second to several minutes may be required to produce the above phenomena, depending upon the discharge. The pain accompanying this operation is severe, but as it only lasts but a second or two, it is generally well born.

DISEASES IN WHICH THE HIGH FREQUENCY CAUSTIC SPARK MAY BE USED.

Carbuncle—Dr. Piffard says that he knows of no better means of aborting a commencing carbuncle, as it does in a moment that which requires several days or a week to accomplish. "In other words," he says, "the cocci are instantly destroyed, together with the follicular wall and the leucocytes have simply

a small inert necrotic plug to deal with, which they usually do with but little accompanying inflammatory action." The author indorses this statement.

Acne.—It is beneficial in treating the indurated pustules, but should be employed in association with other local and general treatment.

Hypertrophic Rosacea.—It has given superior results in these cases. In such cases it is preferable to employ a mild or moderate current for several seconds over an area about the size of a quarter at each sitting. A severe reaction follows the treatment, accompanied by a serous exudate, and on the next day thick yellow crust will form which separates in about a week, leaving a marked improvement. Several applications may be required.

Patches of lichen planus and of chronic eczema, when there is much thickening, may be greatly benefited by one or two vigorous treatments.

Xanthoma planum has been successfully treated by this method, care being exercised not to produce too great a reaction.

Indolent ulcers are benefited by applying the current mildly and until a copious exudate is obtained. Several applications may be required.

Lupus erythematosus may be treated thus, but not so well as with carbon dioxide snow.

Tuberculosis verrucosa cutis should be curetted and the spark applied to the base of the resulting wound.

Small malignant and benign cutaneous neoplasms, naevi, verrucae, blemishes, etc., may be easily destroyed by one application of the caustic spark.

Malignant neoplasms.—Small malignant tumors may be easily and quickly destroyed in this way, but large growths should be excised and the base thoroughly sparked. In operable malignant tumors of the mucous membranes, lips, vagina, cervix, rectum, etc. also of the breast and even of internal organs have been treated in this manner with gratifying

results. Even with better results, as stated, than with X-rays or radium.

The treatment brings about a temporary inhibitory influence over the malignant cells. In cancer of the breast de Keating-Hart's technique is as follows: The diseased tissue is first vigorously fulgurated for the purpose of obtaining vaso-motor constriction. This effect answers the double purpose of lessening hemorrhage and to reduce the danger of metastasis. It also, by modifying the density of the tumor, facilitates the finding of the plain of cleavage between healthy and diseased tissue. The next step is to remove the tumor, then again use the sparks thoroughly. After this course of treatment the dressing is made. The immediate effects of fulguration is always a severe reaction, followed with some sloughing, but granulation and healing rapidly take place.

J. M. K.

MEDICAL.

INFLUENZAL SEPTICAEMIA.

American Journal of Medical Sciences, Vol. 139, No. 4.

Madison thinks that when we consider such frequent complications as endocarditis, arteritis, phlebitis arthritis, etc., it cannot be doubted that the influenzal bacillus frequently invades the blood. The prolonged fever in some cases suggests the invasion of other tissues, rather than a delayed recovery. These cases that so closely resemble typhoid fever are influenzal septicaemia.

Madison reports a case of prolonged influenzal infection in which there was a primary broncho-pneumonia followed by invasion of the blood and ending in recovery. Many observers have reported the bacilli present in blood microscopically, but were not obtained in cultures and others failed to grow it.

Many cases of measles, varicella, whooping cough and diphtheria are shown to have this infection present or develops as a complication. Jehle isolated the influenza bacillus from

the blood in forty-eight cases, forty-two of which were exanthematous diseases.

Horder reports two cases of septicaemia due to influenza bacillus and he believes the infection took place through the lungs. Several other authors give cases due to this infection, in which the micro-organism was grown from the blood. Ghedini seems to have been more successful than any one else in growing the organism from the blood, as he obtained it eighteen times out of twenty-eight cases. The portal of entry in most cases is no doubt through the lungs, as in broncho-pneumonia. Jehle believes the tonsil to be the place of entrance in some cases. The clinical picture of this form of septicaemia is that of all other forms of septicaemia, as profound prostration, lack of appetite, severe headache and marked general pains. The diagnosis of this trouble depends entirely on the demonstration of the bacilli in the blood by means of cultures which has its difficulties. Clinically these cases resemble mostly typhoid fever, in some cases even rose spots being present. There is no specific for this trouble, but it is the main hope that a serum will be obtained soon.

O. N. B.

ALGID MALARIAL FEVER.

T. D. Coleman, Augusta, Ga. (*Journal A. M. A.*, December 25), describes algid malaria, which is one of the three types into which he divides the pernicious form of malarial disease. He defines this special form as a pernicious type of malaria caused by the estivoautumnal form of the malarial parasite, characterized by profound prostration, cold and clammy skin and an unclouded intellect; this latter in strong contrast with the comatose variety of the disease. It occurs in all tropical and subtropical countries where malaria is endemic and does not differ from other forms as to predisposition, age, sex and race. In subtropical countries it occurs chiefly in late summer or early autumn, as a sequel of more or less chronic malaria. The symptoms are described in detail. The diagnosis is made from the history and the presence or absence

of cholera morbus and ptomain poisoning. Of course, the blood examination will be the surest evidence, but it may not exclude coexisting disease. Cases of reasonable doubt, however, are exceptions. The prognosis is generally grave and quinin seems singularly effective. He still uses it, however, hypodermically. The rest of the treatment is symptomatic and supportive. Five cases are reported, three of them personal observations, all of which were fatal, as was also one quoted from the literature.

MESOAORTITIS.

W. T. Longcope, Philadelphia (*Journal A. M. A.*, January 8), says that during the past few years attention has been directed at the Pennsylvania Hospital to the frequent association of a peculiar type of arteriosclerosis, namely mesoaortitis, with a chronic aortic endocarditis causing aortic insufficiency. For some years mesoaortitis has been recognized by German pathologists as a unique form of arteriosclerosis and its connection with syphilis emphasized. In 930 autopsies at the Pennsylvania Hospital, 21 cases showing this condition of mesoaortitis were observed and in rather more than half its association with syphilis was proved. In all but 3 of the subjects there were definite signs of aortic insufficiency during life. While in a few of the cases a history of rheumatic fever was obtained, its absence in the series was rather conspicuous. The cases were compared with 76 cases of chronic aortitis also found in the 930 autopsies and the differences are pointed out in detail between the two classes of cases, especially the frequency of the combination of aortic insufficiency and mesoaortitis. This shows that of the 43 cases of true aortic insufficiency giving symptoms, 18, or 41.8 per cent, were associated with mesoaortitis, and of the 22 cases of aortic insufficiency uncombined with lesion of any of the other valves, 81.5 per cent were associated with mesoaortitis. In his summary, Longcope says that it may be seen that aortic insufficiency unassociated with disease of the other valves is rare after

the fifth decade and that it is seldom associated with the type of arteriosclerosis known as endarteritis deformans. The majority of cases are associated with a characteristic form of sclerosis termed mesaortitis. The involvement of the valves occurs probably under such circumstances by a direct extension of the process along the aortic wall to the aortic valve. Syphilis is commonly the cause, though it may not be the only cause, of this type of sclerosis.

ANIMAL EXPERIMENTATION AND TUBERCULOSIS.

E. L. Trudeau, Saranac Lake, N. Y. (*Journal A. M. A.*, January 1), shows how all our knowledge of everything bearing on the control and prevention of tuberculosis is due to experiments on the lower animals. All the advances previously made, before the infectious nature of the disease had been proved, were limited to pathologic anatomy. He gives a history of the early progress in the direction of experimental studies, showing how through the early work of Klencke, Willemin, Klebs and others, the infectious nature of tuberculosis was demonstrated, but it was not until the epoch-making work of Koch in 1882 on the etiology of the disease that it was generally accepted by the profession and the public. His later work in 1890, demonstrating the value of tuberculin in diagnosis, which has been of inestimable utility in the control of the disease and also in its treatment, is all due to experiments on animals. Far-reaching as the new knowledge of tuberculosis is in the saving of life, it is not entirely easy to estimate it, as so many factors are involved. The death-rate has fallen notably during the last forty years, in some countries only slightly faster since the discovery of the tubercle bacillus, but in others the diminution has been most remarkable since 1882. In New York City there has been a reduction of 40 per cent in the deaths from consumption. In Prussia fully 50 per cent. The results, however, depend largely on the thoroughness and efficiency

with which the preventive measures are carried out. The experience of the past has justified the hope that ultimate control of the disease will finally be attained by knowledge acquired by the same means and will probably depend not only on more thorough and comprehensive application of the facts already learned, which are the basis of all preventive measures so far, but also on the discovery of some specific method of immunization or treatment, which can only be brought about by continued and painstaking studies on animals. It has taught us already much as to the different types of the tubercle bacillus and their virulence and the many ways in which this micro-organism invades the human system and destroys it. In his experience, animal experimentation has directly aided his practice and shown him that the production of artificial immunity is not altogether so unattainable as was formerly supposed. Those who through ignorance or false sentiment are working to have legal prohibition of this most valuable method of study for the prevention of disease, have little realization of or care for the amount of human suffering that exists, and are apparently willing that it should continue indefinitely so long as it does not affect themselves or they do not come in contact with it.

ARTERIOSCLEROSIS.

A. G. Brown, Richmond, Va. (*Journal A. M. A.*, January 8), summarizes the treatment of arteriosclerosis substantially as follows: In the early arterial stage, a strict diet, regimen and anti-toxic treatment, consisting in elimination, intestinal disinfection, diaphoresis, and diuresis. When hypertension persists, the nitrites and iodids should be given, the latter in effective doses, and kept up for a given length of time. When the blood-pressure has become lowered, the intoxication relieved, the kidneys act normally, and the symptoms of arterial spasm disappear, the patients may be considered cured, though a careful observance of the prophylactic regimen must

still be kept up. In the cardioarterial stage, a permanent cure is not to be expected but much can be done to relieve symptoms and to ward off a grave termination. Relief of symptoms, elimination of intoxicants and stimulation of kidney activity are the chief indications. This is accomplished by catharsis followed by nitrates, spartein sulphate, etc. With the tension lower and the skin, bowels and kidneys active, and diet carefully regulated, the use of nitroglycerin, erythrol tetranitrate, potassium or sodium iodid, thyroid extract, and general medical supervision, the disease may be arrested and the serious accidents forestalled. In the myovalvular and cardiectatic stages, which merge into each other so as to form one continued progress to broken compensation, with dilatation of cardiac cavities and frequently orifices, lowered arterial tension, more or less visceral congestion and edema, and dropsy, are to be treated with the digitalis group, theobromin, interdiction of salt intake, restriction of diet to milk, and careful elimination of fluids. In these cases, often appearing hopeless, much can be done to restore the patient to modified activity, and the subject offers a field for the skill of the best powers as physicians.

EPIDEMIC POLIOMYELITIS.

The following are the latest findings announced of the studies of epidemic poliomyelitis in monkeys, by Simon Flexner and Paul A. Lewis, New York (*Journal A. M. A.*, January 1). They have found the virus in lymphatic glands as well as in the brain and cord. In studying the degree of resistance of the virus, they found that the spinal cord from a human case retains its virulence apparently unimpaired after being frozen in a temperature of from 2 to 4 degrees C. for at least 40 days, and also when kept at least 50 days at a temperature of plus 4 degrees C., during which time it had become mouldy and softened. These facts indicate that the cessation of the disease in cold weather does not depend on the destruction of the virus, though it may

effect its multiplication. The spinal cord of an affected monkey still transmits the disease after desiccation over caustic potash for at least 7 days. The activity of filtrates has been confirmed and the possibility of their toxic action being due to soluble toxic properties and not to living organisms has been excluded by transferring the disease by means of the spinal cord obtained from the monkey that succumbed to a filtrate. The possibility of the artificial cultivation of the virus has been demonstrated. In two cases where parallel injections were made into the subcutaneous tissues and the brain, the monkeys inoculated in the first way developed paralysis and the other escaped infection. Some evidence of immunity to reinoculation in monkeys that have recovered from paralysis has been obtained. The injection of an emulsion of virus-containing spinal cord, which had been warmed to 55 to 57 C. for one hour, or to 60 C. for half an hour, under the skin at the same time that the usual intra-cerebral injection of virus was given, in two monkeys, did not prevent the regular development of the paralysis. As regards other animals and their immunity to the disease, the authors state, that, besides many rabbits and guinea-pigs, 1 horse, 2 calves, 3 goats, 3 pigs, 3 sheep, 6 rats, 6 mice, 6 dogs, and 4 cats have had active virus introduced into their brains without any effect whatever, though they have been under observation for many weeks. The authors have found lesions in the intervertebral ganglia of paralyzed monkeys similar to those in the cord and brain, in every instance in which they have looked for them.

CUTANEOUS SYPHILIS.

A. Ravogli, Cincinnati (*Journal A. M. A.*, January 1), publishes the results of his studies, microscopic and otherwise, of the proliferating growths of syphilis. He remarks that in a short article on elephantiasis (*Jour. Cutan. Dis.*, 1906), presented to the American Dermatological Association, he had maintained the luetic origin of this condition when oc-

curring in the genitals, in many instances. He also held that all cases of elephantiasis are started by the presence of infectious germs or of parasites causing irritation and lymph stasis. He goes at length into showing how the germ of syphilis acts in producing vegetating papillary growths, etc. His microscopic findings are illustrated and he comes to the conclusion that the proliferating masses of the tertiary syphilitic ulcers show no special characteristics but have common characters with the proliferations of other morbid processes. The imbibition of the tissues from the lymph stasis, the hypernutrition of the connective tissue corpuscles, cause their division and their proliferation. The normally limiting elastic fibres are gradually lost and the collagenous elements are left free to proliferate without restraint. That the spirochete is a starting point cannot be doubted, as they are shown in the secondary vegetating patches. In the tertiary they were not found, but this does not disprove the above assertion. It is possible they are not so readily stained or may be concealed in the deeper tissues. As regards treatment, it is not difficult to cure the secondary proliferated patches by internal constitutional treatment with external application of calomel or solution of mercurial chlorid, one to five hundred. In some cases strong caustics may be necessary. In some cases, other measures like the use of iodid, local bathing with bichlorid solution, one to one thousand, and local applications of mercurial plasters have been satisfactory, while in others, extensive curetting was required.

TRICHINIASIS.

J. L. Hirsh, Baltimore (*Journal A. M. A.*, January 8), reports a house epidemic of trichiniasis caused by eating raw ham and involving 5 adult members of a family of 8, the other 3 not having partaken of the ham. The first symptoms showed themselves about the sixth or eighth day after the injection, probably at the time when the larvae had fully developed. Edema of the eyelids was ob-

served in all, and in 3 it was the first symptom. All had abdominal cramps, very severe in 2. Nausea and vomiting was observed in 2 cases. Troublesome constipation was the rule; there was no diarrhea. Muscle pains were a prominent symptom. In two cases the temperature was constantly high. In the others there were intermissions. None of the patients had chills. Pulse and respiration followed the same course as the temperature. The urine was negative and no parasites were found in the stools. Urticaria was present in one case and in an aggravated form which lasted 3 days. In only two cases was there a leucocytosis, and that in moderate degree. There was, however, in all an eosinophilia, varying from 18 to 45 per cent, but not in relation to the severity of the infection. As regards treatment, the author thinks that free purgation, if sufficiently early, may do some good, but very little after the worm has penetrated the mucosa. Relief of the muscle and abdominal pains with opiates and hypnotics to secure sleep is about all that can be done until Nature takes care of the parasite. All the patients recovered, the duration of the attack varying from 2 to 6 weeks.

BLACK VOMIT (YELLOW FEVER).

E. H. Vigil, Lima, Peru (*Journal A. M. A.*, January 8), reports and discusses 7 cases of the disease known as vomito negro or black vomit occurring at Iquitos, Peru, on the head waters of the Amazon. It seems to have been confused by local practitioners to some extent with the pernicious malarial fever of the tropics, and he gives the reasons for his diagnosis of yellow fever in these cases. The symptoms of bilious remittent malaria are very similar to those of yellow fever and there are cases in which, while the patient lives, it is impossible to distinguish between them, but the autopsy findings are very different in the two diseases. In the former the spleen is enlarged and the liver engorged and full of bile. In yellow fever the spleen is unaltered and, while the liver is enlarged, it is nearly bloodless and

closely resembles the tuberculous liver. Moreover in Iquitos the anopheles is rare while the stegomyia is abundant, and we have further the significant fact of the failure of quinin in these cases. It is believed by some that the disease is a colibacillosis, especially prevailing

in this locality, but Vigil rejects this and sees no necessity for the assumption of a special Iquitos fever. He asks why form new diseases, occurring in unimmune persons, with all the special characteristics of yellow fever as described by authorities.

PUBLISHERS' DEPARTMENT

BROMALBIN IN EPILEPSY.

The defects of the inorganic bromides in the treatment of epilepsy and other convulsive disorders have long been recognized by medical practitioners. While the bromides have been extensively prescribed—because nothing better had been devised to take their place—their proneness to derange the stomach and to produce systemic disturbances has militated against their usefulness.

The "something better" appears now to be at hand. Reference is made to Bromalbin, an organic compound in which bromine is chemically combined with albumen. Bromalbin contains approximately 15 per cent. of bromine. It is in the form of a light-yellow powder and is odorless and practically tasteless. It is insoluble in water, alcohol, acids and the ordinary solvents, but is slowly soluble in alkaline solutions.

Bromalbin was evolved in the chemical laboratories of Parke, Davis & Co. Before being offered to the medical profession at large it was subjected to thorough clinical tests by leading practitioners throughout the country in a large number of cases in which bromine medication was indicated. Reports

of its use in the treatment of epilepsy were highly encouraging, and the belief is expressed that it will prove equally efficacious in hysteria, neurasthenia, reflex headache, insomnia, migraine and other nervous affections.

The chief advantage of Bromalbin over the inorganic bromides appears to be in its adaptation to long-continued treatment. It passes through the stomach practically unchanged, consequently does not produce the gastric irritation common to the alkaline bromides. Slowly dissolving in the intestinal secretions, it is then absorbed, producing a gentle, prolonged systematic effort. Other advantages are: Its more complete absorption, its comparative tastelessness and the small likelihood that it will produce acne, dizziness, or other symptoms of bromism. It is marketed in powder form (ounce vials) and may be given in water, coffee, chocolate, syrups, wines or any beverage not alkaline in character. It is also supplied in 5-grain capsules (bottles of 100), in which form, perhaps, it is likely to be most commonly used. There is a wide need of a sedative such as Bromalbin promises to be, and fuller reports on the new agent will be awaited with interest by the profession.

AN OPEN LETTER.

TO THE MEDICAL PROFESSION:

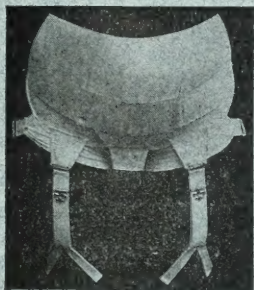
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